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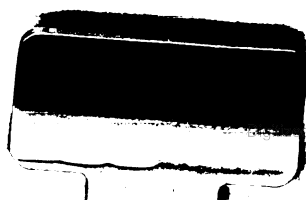
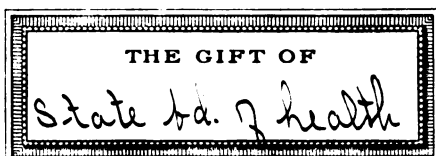
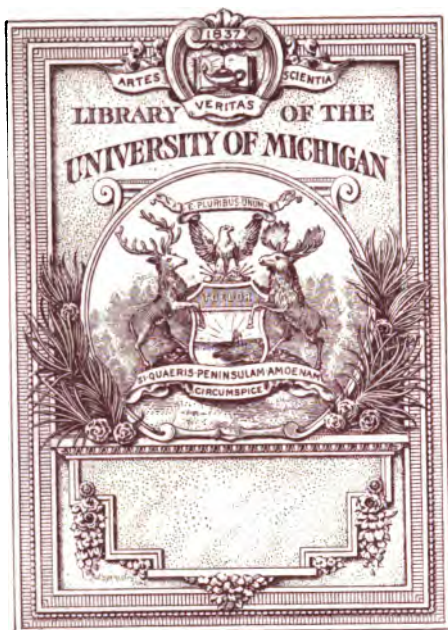
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ELEVENTH
ANNUAL REPORT
OF THE
STATE BOARD OF HEALTH,
OF
INDIANA.
FOR THE
FISCAL YEAR ENDING OCTOBER 31, 1892.

TO THE GOVERNOR.

INDIANAPOLIS:
WM. B. BURFORD, CONTRACTOR FOR STATE PRINTING AND BINDING.
1893.

Resolved, That no paper shall be published in the annual report of this Board except such as are ordered or approved for purposes of such publication by a majority of the members of the Board, and that any such paper shall be published over the signature of the writer, who is entitled to the credit of its production, as well as responsible for the statements of facts and opinions expressed therein.

MEMBERS OF BOARD.

JOHN N. TAYLOR, M. D., PRESIDENTCrawfordsville.
C. N. METCALF, M. D., SECRETARYIndianapolis.
S. R. SEAWRIGHT, M. DLafayette.
S. S. BOOTS, M. DGreenfield.
T. J. DILLS, M. DFt. Wayne.

STATE OF INDIANA,
EXECUTIVE DEPARTMENT,
INDIANAPOLIS, Jan. 7, 1893. }

Received by the Governor, examined and referred to the Auditor of State for verification of the financial statements.

OFFICE OF AUDITOR OF STATE,
INDIANAPOLIS, Jan. 9, 1893. }

The financial part of the within report has been examined and found correct.

J. O. HENDERSON,
Auditor of State.

Returned by the Auditor of State, with the above certificate, and transmitted to the Secretary of State for publication, upon the order of the Board of Commissioners of Public Printing and Binding.

WILLIAM B. ROBERTS,
Private Secretary.

Filed in the office of the Secretary of State of the State of Indiana, January 10, 1893.

MYRON D. KING,
Secretary of State.

Received and delivered to the State Printer January 10, 1893.

CHRIS. H. STEIN,
Clerk of Printing Bureau.

BOARD OF HEALTH REPORT.

HON. IRA J. CHASE,

Governor of the State of Indiana.

Agreeable to an act establishing the Indiana State Board of Health, and defining its duties and powers, the eleventh annual report of this Board for the fiscal year ending October 31, 1892, is hereby submitted. The Board must make, according to law, "sanitary investigations and inquiries respecting the causes of diseases, especially of epidemics, the sources of mortality and the effects of localities, employments, conditions and circumstances on the general health of the people and gather such matters as they may deem beneficial to the preservation of the health of the citizens of the State. They are also empowered to regulate and prescribe the location of plumbing, drainage, water supply, disposal of excreta, heating and ventilation of any public building or institution and to inspect the same."

They must make intelligent and profitable use of such information as may be collected along these lines of sanitary investigation and annually make a report to the Governor of their work, with such suggestions as to legislative action as they may deem proper.

With an earnest desire to comply as far as possible with the requirements of the statute, the Board has employed every means at its command to accomplish the objects for which it was created.

Realizing that the work of the Board primarily is one of education, and its chief work that of preventing disease by removing the causes that produce it, and thereby prevent sickness, death, suffering and financial loss to the people, the members of the Board have made an honest endeavor to show themselves worthy of the duties that have been confided to their care, by employing their best energies in making themselves

proficient in the study of hygiene and State sanitation, so as to be able to perform their work in a thorough manner, teach the people correctly, and diffuse among them new and advanced ideas on these subjects, thereby causing them to understand the benefits to be derived from obeying well known sanitary rules and regulations, and securing their ready compliance with the requirements of the health boards of the State.

The Board from time to time has given to the people, through the medium of circulars, pamphlets and the annual report, the laws relating to the public health, the results of its various sanitary investigations, also full instructions how to care for those sick with dangerous communicable diseases, and how to prevent their continuance and spread.

The press of the State has at all times rendered valuable assistance, by giving publicity to everything which had for its object the prevention of disease and the improvement of sanitary conditions.

Within the year there have been several severe outbreaks of contagious and infectious diseases, diphtheria appearing more frequently than any other disease of this class. Diphtheria assumed an epidemic form in several towns and cities of the State, namely: Macy, Marion, Fort Wayne, Bluffton, Columbia City, Shelbyville, Columbus, Indianapolis and a few other places.

With the increased power given to Boards of Health by the last General Assembly, and our knowledge of how to manage them, these outbreaks were readily brought under control. It is a significant fact that from a large per cent. of the counties comes the report that "we have had no epidemics of any kind within the past year." (See report of health officers in another part of this report.) The sanitary conditions of school houses, jails, poor asylums and all buildings of a public character are much better than they were a few years ago, and their construction and care receives far more attention than they did before this Board caused annual inspections of them to be made and pointed out their defects and suggested the remedy.

The sewerage in both the Northern and Southern Prison for years was insufficient, and in fact amounted to a nuisance. After several visitations and inspections by the Board and consultations with the prison authorities, plans were agreed

upon, which have since been carried into execution which have entirely remedied the evils.

As will be seen from the following diagram and letter from Warden J. W. French, of the Prison North, that institution now has a sewer from the prison to the lake.

STATE PRISON NORTH,
MICHIGAN CITY, IND., Feb. 4, 1892. }

To the State Board of Health:

GENTLEMEN—The appended drawing is a front draft, of what is known as the "Prison Sewer," now under process of construction at the Indiana State Prison North.

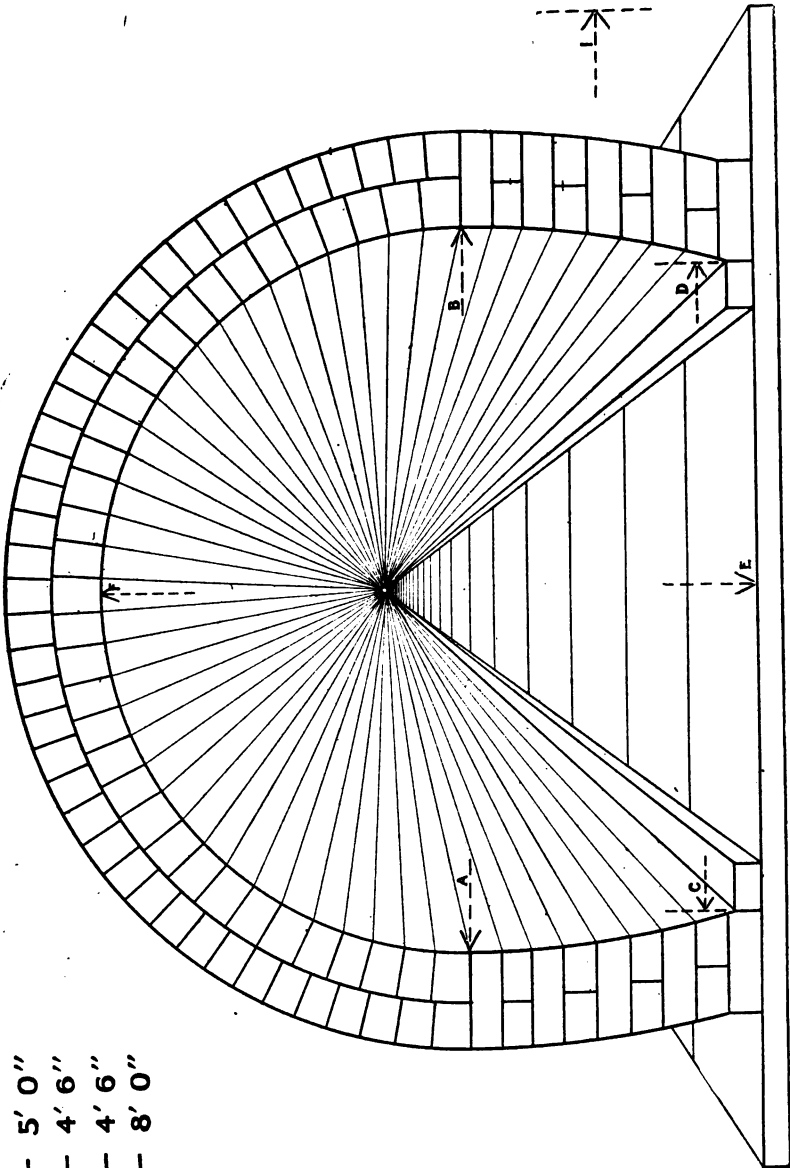
This sewer connects the old prison sewer which extends from the north wall of the Prison 300 yards north to the intersection of Blair Creek, with the sewer constructed some years ago by the city of Michigan City, with moneys appropriated by the State Legislature, which sewer was to have extended from Lake Michigan harbor to the Prison, but which was only completed along Fourth Street west to the intersection of the crossing of the M. C. Railway, leaving 4,400 feet of a gap, and it is to close this gap that the present work is being done.

The present work covers a distance of 4,400 feet and extends along Fourth Street west a distance of 1,100 feet, thence South along Willard Avenue a distance of 2,540 feet, thence west along Tenth Street a distance of 760 feet to the intersection of Blair Creek and the present Prison sewer—the purpose being to carry the flowing water in this creek along with the sewerage of the prison and giving a constant depth of six to ten inches of flowing water in the sewer.

The fall of the sewer is nine feet in a distance of 4,400 feet. The walls are eight inches thick. The inside horizontal measurement at the base is four feet six inches, and the horizontal diameter is five feet.

The vertical diameter is four feet six inches in the clear. The base of the walls as shown in the drawing is constructed on a leaning templet to the height of two feet and the arch is perfect, making the sewer wall in effect a complete arch over from base to base.

The floor of the sewer is wood (pepperidge) eight feet long, two and one-half inches thick, and laid horizontal to the lineal measurement of the sewer.



On this floor, four and one-half feet apart, are spiked streamers 2x4, as shown in the drawing, and the base of the wall rests against these streamers on the inside held firm by the outer pressure of the earth. This floor being forever beneath flowing water will not decay.

QUANTITY AND KIND OF MATERIAL USED.

Lumber.....	feet, 500,000
Cement.....	bbls., 600
Brick.....	800,000
Cost	\$8,000

This material is all furnished and delivered by the city at the city's expense, and the sewer is being constructed under my direction with prison labor. To date I have completed about 1,600 feet of it, and this the most difficult part of it because of my having to contend with sand-hills, quick-sand and water.

The method of supplying the material and constructing the work was reached as a compromise between the city and the prison out of the many sewer complications reaching back over a series of years and with which your honorable Board is more or less familiar.

All of which is respectfully submitted by

Yours truly,

J. W. FRENCH,
Warden.

The sewer for the Central Hospital for the Insane empties into Little Eagle Creek, and the water in this stream is not sufficient to carry off the sewage. Hence, at its outlet, is an accumulation of filth amounting to a nuisance. The citizens living in the vicinity have entered complaint and the Trustees, although willing to remedy the evil, find themselves unable to do so because they have not the necessary funds at their disposal. The Legislature will be asked to make an appropriation to build a sewer of sufficient length and capacity, and it is hoped that they will heed the request.

In order to further the efforts of the Board to restrict and prevent diseases of a communicable nature, a conference of town, city and county health officers was held in this city last June.

While all the health officers of the State were not present, the attendance was large, and those present manifested a deep interest in the proceedings. The public health laws and sanitary matters which health officers have to deal with in the daily discharge of their duties were discussed by our best sanitarians, and we feel assured in saying that much good was accomplished. (A full account of the transactions are published in another part of this volume.)

The prevalence of cholera in Europe suggests the question of its reaching this country. In order, therefore, so far as possible to place our State in a condition such that if it does come its ravages will be reduced to the minimum, the Board ordered a general cleaning up by Boards of Health. While this was neglected in some localities, yet we feel warranted in saying that never was the State in a better sanitary condition than it now is. If we are so fortunate as to escape a visitation of cholera, the lessening of other diseases, and therefore deaths, will be ample compensation for this work and any expenditure of money it may have cost. Cholera, like typhoid fever, diphtheria, and diseases of a kindred nature, have their origin in filth, and can only flourish where the conditions are favorable.

That such conditions should be allowed to exist where Boards of Health are located is an evidence of inefficiency or dereliction of duty amounting to criminality. We need not fear being over-educated on the subject of filth. We can not be too clean. The good old saying, "Cleanliness is next to Godliness," will last as long as dirt lasts.

The mere mention of the foregoing diseases strikes terror to the hearts of many, and awakens sorrowful remembrances of loved ones passed away. The specific germs of these diseases find a rich soil in filth.

This Board has from time to time urged upon the Legislature the necessity of providing an epidemic fund (similar provisions have been made by Illinois and other States), to be placed under the direction of the Governor, or some other competent and responsible authority, to be used in case of necessity—in case of serious outbreaks of infectious and contagious diseases. Certainly no valid objection can be urged against such action by the Legislature, but on the other hand it seems to us that reason and humanity favors such legislation.

The fund so appropriated or set apart may not be needed; indeed it is hoped that it may not be; but the maxim "in time of peace prepare for war," by a little change, is applicable in this case. It is the part of wisdom to be prepared for such emergencies, and if so prepared, the expense of arresting an epidemic will be much less than to have to meet it without previous preparation. Every city and town should be provided with such a fund, no less than the State.

Epidemics from communicable diseases are easily prevented at the start, exactly as are conflagrations.

From this standpoint health departments are like fire departments, and should be always perfectly equipped.

It is conceded by all physicians and sanitarians that much of our sickness has its origin in impure water. Water pollution, therefore, furnishes a wide field for investigation. Considerable work has been done by this Board in this direction, but much that ought to be done has been left undone because a lack of the necessary funds to pursue this work. The present appropriation, \$5,000, is wholly inadequate, and we wish to emphasize the fact that scarcely a State in the Union which has a State Board of Health has so small an amount with which to do the work. Thirty-four States now have Boards of Health, and many of them regard these as among their most important State departments. Within the past year suit was instituted against the straw board works at Noblesville, in the United States Court, which seeks to enjoin them from running their refuse into White River. Much testimony has been heard in the case, but no decision has yet been reached.

The result is waited for, with a great deal of interest by citizens along the course of the river, as well as by those engaged in manufacturing at different points in the State.

There is some opposition to boards of health in certain localities where local boards are in a great measure careless, indifferent and inefficient. While in localities where boards of health have demonstrated their usefulness, by their work in sanitation, no such opposition exists, but on the contrary, a hearty support is given to officials, both morally and financially.

It is true that money paid the health officers who rendered no service to the public is a useless expenditure; but the fault lies in the appointing power and the officers so appointed, and

not in the law; in the administration of the law rather than in the law itself.

As has been said in former reports, the work of the health officer is of such a nature that its full value can not be estimated. His is a work of prevention, largely, and not of cure, and can not therefore be seen by the general public. If an epidemic breaks out and he is instrumental in staying its ravages, he is praised for this work and his efforts are fully appreciated, but how much better is it to prevent disease, and of how much more value to the public? Immunity from disease, however, creates the impression that the health officer is not needed.

A better appreciation of his work will come with a better education in regard to the cause of preventable diseases, and with these will disappear all opposition now so active in a few localities.

ANNUAL REPORTS.

The number of reports authorized by law (3,000) is entirely too small to supply the demand. More than twice this number could be judiciously distributed, as from year to year the demand increases, and the quota to each county is so limited that not half those desiring them can be supplied.

STATISTICS.

We are again compelled to admit that our statistics are far from complete. This is due to several causes and they will not be much improved until the system is changed.

In some counties they are much more nearly complete than in others, owing to the fact that the health officers in those counties are more vigilant and demand a strict enforcement of the law, while in a few of the counties no effort is made to collect them and only such are received as physicians voluntarily report. We are confident that in the matter of mortuary statistics this could be entirely remedied by requiring a burial permit, based on a report of death. Several cities and towns require this, and the result is that all deaths are promptly reported.

We have urged this upon former Legislatures, but owing to a press of important business, together with the short time of the session, it has failed to become a law.

We sincerely hope that such a law will be enacted in the near future in order that our statistics may become as valuable as the law contemplates them to be. Incomplete statistics are not only worthless, but misleading.

LEGISLATIVE RECOMMENDATIONS.

Although in former reports attention has been called to such additional legislation as the Board deems important, we again insist upon the following:

1. Requiring permits in all cases of death, in order that complete mortuary statistics may be obtained.
2. The payment of a small fee for collecting such statistics.
3. Providing by fees or salaries for the payment of town, city and county Secretaries of Boards of Health.
4. Vesting the appointing power and removal of County Health officers in the State Board of Health.
5. An increase in the number of annual reports.
6. An increase in the annual appropriation from \$5,000 to \$10,000.
7. Providing for a contingent or epidemic fund, under the control of the Governor or other authority provided for by legislative enactment, to be used in case of emergency.
8. That the Legislature appropriate a sufficient sum of money to enable the Trustees of the Central Hospital for the Insane to successfully dispose of the sewerage of said Institution, as under the present arrangement it is a menace to the health of the people of Mt. Jackson.

FINANCIAL EXHIBIT.

The following is a statement of the receipts and expenditures for the fiscal year, commencing November 1, 1891, and ending October 31, 1892:

Out of the annual appropriation of \$5,000 to carry on the work of this department, the members have been paid all actual expenses incurred by attending regular and special meetings of the Board, as well as expenses caused in making sanitary inspections of buildings under the control of the State government.

Reports of inspections made by members of the Board will be found in another part of this report. From our fund we

pay the current expenses of the office, the Secretary and clerks' salaries, printing bills, including all publications of the Board, except the annual report.

The Board supplies all the town, city and county Health Boards, physicians' blanks for the return of births, deaths, contagious and infectious diseases; County Clerks for the return of marriages, and furnishes County Boards of Health with blanks to make regular quarterly reports, as well as blanks for special reports of contagious and infectious diseases; blank transit permits for the transportation of dead bodies, and blank certificates for undertakers; preventable disease circulars for general distribution among the people; the rules and regulations of the Board for the government of physicians and health officers; programs, and all necessary printing for sanitary conventions held in the State; also printed postal cards on which health officers and physicians in the different parts of the State make weekly reports to this Board of the prevalence of all preventable diseases, and blanks for the sanitary inspection of school houses, poor asylums and jails. After paying all bills contracted during the year, we find that the amount appropriated for this department has been entirely exhausted.

1891.

Nov. 20.	P. J. Gorman, salary	\$100 00
Dec. 1.	S. W. Burns, janitor	8 00
" 1.	Estella Jackson, salary	50 00
" 1.	Mallie Metcalf, salary	50 00
" 1.	D. N. Berg, salary	83 33
" 1.	C. N. Metcalf, salary	200 00
" 1.	C. N. Metcalf, traveling and hotel expenses	23 85
" 31.	S. W. Burns, janitor	8 00
" 31.	Estella Jackson, salary	50 00
" 31.	D. N. Berg, salary	83 33
" 31.	W. B. Burford, printing and stationery	187 66
" 31.	John Cutting, sentinel	8 00
" 31.	Mallie Metcalf, salary	50 00
" 31.	Andrew Young, sanitary N	15 00
" 31.	A. N. Bell, sanitarian	4 00
" 31.	Fairbanks, Morse & Co., scales	3 00
" 31.	S. R. Seawright, traveling and hotel expenses	8 00
" 31.	Thos. J. Dills, traveling and hotel expenses	50 00
" 31.	S. S. Boots, traveling and hotel expenses	5 70
" 31.	John N. Taylor, traveling and hotel expenses	6 85

1892.

Jan. 21.	John N. Taylor, traveling and hotel expenses	13 70
" 21.	S. S. Boots, traveling and hotel expenses	5 70

1892.		
Jan.	21.	S. R. Seawright, traveling and hotel expenses \$8 00
"	21.	J. Davidson, journal 11 00
"	21.	C. N. Metcalf, traveling and hotel expenses 34 25
"	28.	J. Stewart, horse and buggy 2 00
"	28.	John N. Taylor, traveling and hotel expenses 6 85
"	28.	S. S. Boots, traveling and hotel expenses 5 70
"	28.	S. R. Seawright, traveling and hotel expenses 8 00
Feb.	1.	D. N. Berg, salary 83 33
"	1.	Estella Jackson, salary 50 00 ^a
"	1.	Mallie Metcalf, salary 50 00 ^a
"	1.	S. W. Burns, janitor 8 00 ^a
Mar.	31.	E. P. Thompson, postage 30 00 ^a
"	31.	Annals of Hygiene 2 00 ^a
"	31.	C. N. Metcalf, traveling and hotel expenses 26 15 ^a
"	31.	S. S. Boots, traveling and hotel expenses 5 70 ^a
"	31.	S. R. Seawright, traveling and hotel expenses 8 00
"	31.	John N. Taylor, traveling and hotel expenses 6 85
"	31.	Estella M. Jackson, salary 50 00
"	31.	D. N. Berg, salary 83 33
"	31.	Mallie Metcalf, salary 50 00 ^a
"	31.	S. W. Burns, janitor 8 00 ^a
"	31.	C. N. Metcalf, salary 300 00
"	31.	W. B. Burford, printing and stationery 145 69
Apr.	1.	D. N. Berg, salary 83 33
"	1.	Estella Jackson, salary 50 00
"	1.	Mallie Metcalf, salary 50 00
"	1.	S. W. Burns, janitor 8 00
May	1.	S. W. Burns, janitor 8 00
"	1.	Estella Jackson, salary 50 00 ^a
"	1.	Mallie Metcalf, salary 50 00 ^a
"	1.	D. N. Berg, salary 83 33
"	19.	E. P. Thompson, postage 30 00 ^a
June	1.	S. W. Burns, janitor 8 00 ^a
"	1.	D. N. Berg, salary 83 33 ^a
"	1.	Mallie Metcalf, salary 50 00 ^a
"	1.	Estella Jackson, salary 50 00
"	16.	C. N. Metcalf, traveling and hotel expenses 53 35
"	16.	S. R. Seawright, traveling and hotel expenses 33 00
"	16.	S. S. Boots, traveling and hotel expenses 5 70
"	16.	Indianapolis News 5 20 ^a
"	16.	C. G. Hulburt, eyelet press 3 00 ^a
"	16.	John L. Booth, livery 4 00 ^a
"	16.	Bowen-Merrill Co 3 30 ^a
"	16.	Indianapolis Journal 25 15 ^a
"	16.	W. B. Saunders, climatologist 2 00
"	16.	J. F. Edwards, Annals of Hygiene 2 00
July	1.	S. W. Burns, janitor 8 00
"	1.	E. P. Thompson, postage 25 00
"	1.	D. N. Berg, salary 83 33
"	1.	Estella Jackson, salary 50 00

1892.

July	1.	Mallie Metcalf, salary	\$50 00
"	1.	C. N. Metcalf, salary	300 00
"	14.	Wycoff, S. & B., copying ribbons	2 00
"	14.	S. R. Seawright, traveling and hotel expenses	18 00
"	14.	S. S. Boots, traveling and hotel expenses	5 70
"	14.	John N. Taylor, traveling and hotel expenses	6 85
"	14.	C. N. Metcalf, traveling and hotel expenses	30 95
Aug.	1.	S. W. Burns, janitor	8 00
"	1.	D. N. Berg, salary	83 33
"	1.	Estella Jackson, salary	50 00
"	1.	Mallie Metcalf, salary	50 00
Sept.	1.	S. W. Burns, janitor	8 00
"	1.	D. N. Berg, salary	83 33
"	1.	Estella Jackson, salary	50 00
"	1.	Mallie Metcalf, salary	50 00
"	16.	S. S. Boots, traveling and hotel expenses	5 70
"	16.	John N. Taylor, traveling and hotel expenses	8 85
"	16.	S. R. Seawright, traveling and hotel expenses	17 25
"	29.	E. P. Thompson, postage	25 00
Oct.	1.	S. W. Burns, janitor	8 00
"	1.	D. N. Berg, salary	83 33
"	1.	Mallie Metcalf, salary	50 00
"	1.	Estella Jackson, salary	50 00
"	1.	C. N. Metcalf, salary	300 00
"	1.	D. N. Berg, expenses	2 50
"	1.	C. N. Metcalf, traveling and hotel expenses	12 35
"	27.	W. B. Burford, printing and stationery	494 93
"	27.	E. P. Thompson, postage	4 32
"	27.	T. J. Dills, traveling and hotel expenses	20 00
"	27.	S. R. Seawright, traveling and hotel expenses	16 00
"	27.	S. S. Boots, traveling and hotel expenses	11 40
"	27.	John N. Taylor, traveling and hotel expenses	6 85
"	31.	D. N. Berg, salary	83 33
"	31.	Estella Jackson, salary	50 00
"	31.	Mallie Metcalf, salary	50 00

LIBRARY.

The library embraces a collection of works by recognized authorities on diseases of domestic animals, bacteria, cholera, drainage, ventilation, heating, food, hygiene, preventive medicine, sanitary science, sewers and sewage, small-pox, suicide, typhoid fever, water, zymotic diseases, and miscellaneous works. Health officers, physicians or other responsible parties desiring to pursue the study of sanitary subjects and matters relating to public health, or wish to investigate subjects of interest to this department, or to use them in discussions before

societies or conventions interested in the advancement of sanitary science, can obtain the loan of any of these works by complying with the following terms:

1. Application must be made in writing. Said application must be endorsed by the health officer nearest the party making the application.

2. No more than one book shall be loaned to the same person at the same time.

3. The term for which a book may be loaned shall not exceed three weeks, but at the end of that time a renewal for two weeks more may be granted on application.

4. When a book is loaned, the Secretary shall enter upon record the name of the borrower, the title of the book, date of loan, etc.

The following is a complete catalogue of books belonging to the library:

AMERICAN HEALTH PRIMERS, TITLED AS FOLLOWS:

Brain Work and Overwork	Wood.
Eyesight and How to Care For it	Harlan.
Hearing and How to Keep it	Keen.
Long Life and How to Reach it	Richardson.
Our Homes	Hartshorn.
Sea Air and Sea Bathing	Packard.
School and Industrial Hygiene	Lincoln.
Summer and its Diseases	Wilson.
The Mouth and the Teeth.	White.
The Skin in Health and Diseases.	Bulkley.
The Throat and the Voice.	Cohen.
Winter and its Dangers	Osgood.

APPLETON'S HEALTH PRIMERS.

Baths and Bathing.
Exercise and Training.
Personal Appearances.
Premature Death, its Promotion and Prevention.
The House and its Surroundings.
The Heart and its Functions.
The Nervous System.
The Skin and its Troubles.

ANIMALS AND THEIR DISEASES.

Actinomykosis	Fleming.
Animal Diseases and Their Relation to Public Health .	Billings.
Animal Plagues, 2 vols.	Fleming.

2—Bd. of H.

Animal Parasites of Sheep.	Curtice.
Contagious Diseases of Cattle.	Fleming.
Contagious Diseases of Domestic Animals.	U. S. Bureau.
Diseases of Live Stock.	Teller.
Human and Animal Variola	Fleming.
Lung Plague Among Cattle.	Law.
Veterinary Science.	Williams.

BACTERIA.

Bacteria.	Maguire.
Bacteria and the Germ Theory.	Gradle.

DRAINAGE.

Agricultural Drainage	Dent n.
Drainage.	Gerhardt.
Drainage for Health	Wilson.
Farm Drainage	French.
House Drainage and Water Sewers.	Bayliss.
Land Drainage.	Reeves.
Our Homes.	Murphy.

FOOD.

Food and Poisons.	Blythe.
Health in diet	English Conference.
Bazar Book of Health.	Harper.
Bible Hygiene.	By a Physician.
Hand Book of Hygiene.	Wilson.
Health in Relation to Civic Life.	English Conference.
How to Live.	Wilson.
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Health.	Corfield.
Maintenance of Health	Forthergill.

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Eyesight, Good and Bad	Carter.
Dangers to Health	Teale.
Preventive Medicine	Richardson.
Seven Sources of Health.	Strange

SANITARY SCIENCE.

American Sanitary Engineering	Philbrick.
Dwelling Houses.	Corfield.
Hand Book of Sanitary Science	Marsh.
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House Sanitation.	Denton.
Mechanics of Ventilation.	Rafter.
Sanitary Care and Treatment of Children.	Anderson and Jacobi.
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Sanitary Condition of Houses.	Waring.

Sanitary Engineering.	Latham.
Sanitary Plumbing.	Heyler.
Sanitation, The	Bell.
Steam Heating.	Waldron.
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Ventilation	Leeds.
Ventilation	Billings.
Ventilation of Buildings	Butler.

SEWERS AND SEWAGE.

Disposal of Sewage.	Robinson.
Sewers and Drains	Adams.
Sewers and Gases.	Devarona.
Sewage Poisoning	Blake.
Sewage and its Utilization.	Corfield.

SEPULTURE.

Sepulture	Wicks.
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SUICIDE.

Suicide	Morcelli.
Suicide	O'Dea.

VACCINATION.

Essential of Vaccination	Hardway.
Vaccination	Edwards.
Vaccination	Seaton.

WATER.

Potable Water.	Folkhard.
Examination of Water	Fox.
Water.	Parry.
Water Analysis	McDonald.
Water and Water Supply	Nichols.

ZYMOTIC DISEASES.

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Cholera	McPherson.
Cholera, Asiatic, History of	Macnamara.
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Contagiousness of Consumption.	Burney, Yeo.
Common Nature of Epidemics.	Smith.
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Delaware, 1879, 1880, 1885, 1888, 1890.

District of Columbia, 1879 to 1883, inclusive.

Florida, 1890.

Illinois, 1879 to 1887, inclusive.

Iowa, 1881, 1883, 1885, 1887, 1889, 1891.

Kansas, 1885 to 1891, inclusive.

Kentucky, 1880 to 1883, inclusive.

Louisiana, 1873, 1875, 1877, 1878, 1879, 1884, 1886, 1887.

Maine, 1885 to 1889, inclusive.

Maryland, 1886 to 1892, inclusive.

Massachusetts, 1870 to 1890, inclusive.

Michigan, 1872 to 1879, inclusive.

Minnesota, 1874, 1876, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1889, 1890.

Mississippi, 1879 to 1883, inclusive.

Missouri, 1888.

New Hampshire, 1882 to 1891, inclusive.

New Jersey, 1878, 1879, 1881, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891.

New York, 1871, 1872, 1873, 1881, 1882, 1883, 1884, 1885, 1887, 1888, 1889, 1890, 1891.

North Carolina, 1887, 1889, 1890.

Ohio, 1886 to 1890, inclusive.

Ontario, 1882, 1883, 1884, 1886, 1887, 1888, 1889, 1890.

Pennsylvania, 1885 to 1890, inclusive.

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Tennessee, 1877, 1884.

Vermont, 1888.

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Wisconsin, 1876 to 1890, inclusive.

MEMBERS OF THE STATE BOARD OF HEALTH AND THEIR TERM OF OFFICE.

In accordance with an act passed by the Legislature February 19, 1891, the present State Board was appointed by the Board of Appointment created by that act, consisting of the Governor, Auditor and Secretary of State, in the office of the Governor February 21, 1891. The following members were selected:

Samuel R. Seawright, M. D., Lafayette, Indiana, and Thomas J. Dills, M. D., Fort Wayne, Indiana, whose term of office will expire March, 1893; John N. Taylor, M. D., Crawfordsville, Indiana, and Samuel S. Boots, M. D., Greenfield, Indiana, whose terms of office will expire March, 1895.

This Board, after its appointment, met in the State House on February 26, 1891, and perfected the following organization by electing John N. Taylor, President, Samuel S. Boots, Vice-President, and Charles N. Metcalf, M. D., Secretary and executive officer, whose term of office will expire in February, 1895.

The Board, on January 28, 1892, adopted amended rules for the government of Town, City and County Boards of Health, which will be found in another part of this report.

It is very gratifying to the Board to be able to report that there has been a decided interest manifested by the people in improvements of a sanitary character advocated by it within the past year.

This has been made evident by the alacrity and promptness with which outbreaks of contagious and infectious diseases are reported quarantined and controlled, by the greater attention given to municipal sanitation, by the number of towns seeking improvements in sewage and the disposal of garbage, water supplies, and the great frequency with which the State Board of Health has been called upon for aid and advice.

This creation of popular sentiment in favor of better hygienic and sanitary surroundings is in most part due to the united and constant efforts of the State and best local Boards of Health, and are hailed as hopeful signs which will materially improve the public health in the near future. Within the year the demands upon the Board have been unquestionably much more numerous than ever before.

Questions relating to improvements of the sewerage and water supplies of towns and cities, disposal of excreta and garbage, the location of school houses and other public buildings, the control of epidemic diseases and the abatement of nuisances, have been constantly referred to the Board. All of which have received prompt attention either by written instructions or personal attention by some member of the Board.

TOWN AND CITY BOARDS OF HEALTH.

We wish to emphasize what we have already said in some of our previous reports relating to the duties and responsibilities of Boards of Health and their executive officers.

There are now in the State one hundred and seventy organized Town and City Boards of Health. A few of these are older than the State Board, having been created by a special ordinance of Town or City Council before its organization. Many of them have given to their Boards of Health special powers sufficient for the abatement of all nuisances and the spread of contagious and infectious diseases. Eighteen towns and cities require burial permits.

By the enforcement of this requirement they are able to secure a report of every death occurring in each of these towns and cities because no dead body can be buried or shipped without first obtaining from the Secretary of the local Board a permit so to do, and are thereby enabled to give accurate vital statistics. We urge upon the other one hundred and fifty-two

towns and cities of the State that have organized Boards of Health to adopt the same method, so that in the future they may be able to give correct mortuary statistics, which information when reliable is of great importance and value to any locality.

COUNTY BOARDS OF HEALTH.

In accordance with the law creating the State Board of Health the ninety-two counties of the State have organized boards of health.

The Board of Commissioners of each county constitutes a Board of Health *ex officio* for each county respectively of the State, whose duty it is to protect the public health by the removal of all causes of diseases when known, and in all cases to take prompt action to arrest the spread of contagious and infectious diseases, to abate and remove all nuisances dangerous to the public health of the citizens of the State, and perform such other duties as may be required of them by the State Board of Health pertaining to the health of the people.

They shall, annually, at their first meeting in December, elect a Secretary, who shall be the executive officer of the Board, and shall serve as such health officer for one year from the first of January next ensuing his election, and shall receive such compensation from the County Treasury as the Board electing him may determine. It is the duty of the Secretaries of these County Boards of Health to promulgate and enforce all rules and regulations issued by the State Board for the protection of the public health, and give to this department such information and statistics as it may deem necessary.

It is part of their duty to quarterly make reports to this office of all marriages, births, deaths, and contagious and infectious diseases and the cause of sickness occurring in the counties which they are serving; also to demand of the physicians practicing in their respective jurisdictions, that they report all births and deaths happening in their practice, within a period of five days, and also that the Coroners of their counties report to them all deaths where they hold judicial investigations within the same period that physicians are required to report. They are also called upon to strictly enforce all rules adopted by the State Board of Health, requiring contagious and infectious diseases to be reported and quarantined as soon

as recognized. It should be the desire and ambition of every health officer, as soon as elected, to make himself familiar with all the sanitary laws, rules and regulations of the State (a copy of which is always furnished by this Board), and carefully study and intelligently interpret not only these but such instructions as the State Board may issue, and require a strict compliance with the same. It too frequently happens that thoroughly good and efficient officers, who in every way understand and appreciate their duties and are not afraid to enforce the laws, rules and regulations, and competent in every respect, are removed because their political views are different from those of the appointing power.

If civil service should prevail anywhere, it should be in the health service of the State, and especially when it is so difficult to secure good, energetic and reliable men for the position.

It is the duty of these officers to anticipate diseases, by having a thorough knowledge of their causes and compel a removal of the same, and by doing so prevent sickness and death, and financial loss to the people they are serving.

They should acquaint the people with the nature and best means of prevention of contagious and infectious diseases, and make every possible effort to educate the masses in the latest methods employed to preserve the public health by distributing among them literature treating upon the various subjects pertaining to State sanitation.

It has been stated by an able writer on sanitary matters that "an outbreak of an infectious disease extending beyond its first victims unchecked is an evidence of neglect or ignorance of duty by local boards, inexcusable because a knowledge of methods of prevention or control and the legal power to enforce regulations to those ends have been abundantly provided." Their duties extend to the home of every citizen within their control, and demand the exercise of intelligence, good judgment and a good fair knowledge of human nature.

They are frequently called upon to make "sanitary investigations and inquiries respecting the causes of mortality and the effects of localities, employments, conditions, ingesta, habits and circumstances on the health of the people;" examine into the conditions of dwellings, tenement houses and the water supply of towns, cities and public institutions, and consider

methods to be employed for the purpose of enforcing the abatement of nuisances.

This embraces some of the more important duties of a health officer. In order to acceptably fill the office with benefit to the people, they must be active, persistent, energetic, faithful and fearless in the performance of their work, and possess the moral and combative courage to compel friends as well as enemies to obey the law. The position is one that should not be filled by a "laggard," "drone," a timid man or one with mercenary proclivities, who is in search of the "filth lucre" he may be able to secure out of the position.

We have many health officers in the State who meet all the requirements of the office, while there is considerable of a minority who pay very little attention to the performance of their duties, and apparently take no interest whatever in sanitary work, making no effort to inform themselves on the simplest laws, rules and regulations relating to the public health of the State.

It is only when a great emergency arises and the citizens of their respective localities insist and demand that something be done to relieve them of an intolerable nuisance or prevent, if possible, the spread of an epidemic, that they have aroused from a lethargic state and made any sort of a pretense of performing the work required of them.

Such officers are unquestionably the cause of the opposition and niggardly support which Boards of Health in some localities receive.

A few give as an excuse for neglecting their duties that they are poorly remunerated for the work required.

They are all well aware of the amount they are to receive, but are totally ignorant of the manifold requirements of the office before assuming its duties. This being a fact, we suggest that they be compelled to faithfully do their work, or else "step down and out" and let some one have the place who will attend to it.

There are medical men in the State who have made great sacrifices of both time and labor in serving as secretaries of health boards, without any local encouragement, either in the form of thanks or sufficient remuneration.

They have earnestly performed their duties, nursing the hope that some day the people would be sufficiently educated to

appreciate the necessity of local health organizations and liberally compensate some one in a financial way for the services rendered.

The law specifies how these officials are to be appointed and paid, but it does not stipulate what salary they are to receive, leaving it entirely with the appointing power to fix the compensation.

Experience has proven that County Commissioners, Town Trustees and City Councils are usually composed of a class of men who are too frequently influenced by the question of finance alone and leave sanitary questions to take care of themselves.

As a result, many of the best men in the service have been obliged to abandon the work, and their places have been supplied with indifferent and oftentimes incompetent men. The law should be amended so that health officers would receive a fixed and just compensation.

It might be difficult to arrive at any equitable equalization of salaries. The salaries and fees of other towns, city and county officials are fixed by statute; for instance, the last General Assembly created the office of County Assessor, and stipulated his compensation. Why can it not fix the salaries of county health officers? Perhaps the best plan would be to grade their pay according to the population, trades and business interests of the people of the different communities they are called upon to serve.

At present several of the counties allow the position to be filled by the lowest bidder; in other words they "farm it out" to some "professional mendicant" who is willing to sell himself for a "mess of pottage," therefore showing that they have no regard whatever to the qualifications of the applicant. This is an extremely pernicious practice, the inevitable result of which is bad and should be condemned by every reputable man in and out of the profession who is interested in the progress of modern sanitation and the preservation and prolongation of human life. A leading sanitary journal of this country correctly stated when it said "There are some commodities that are suitable for the auction block, but brain is not one of them; it is an old theme, this competition bugbear, and it has been written up and written down and written all around. Brain and its intelligent service can not be measured by the foot, the

pound or the cord, and inasmuch as it has no unit of measure as to its value except experience, and that a very elastic one, it follows that it can not be composed or bought on the same market as iron pipe, cement or paving blocks."

In view of the fact that our Boards of County Commissioners are usually composed of a class of men who never interested themselves in sanitation or matters relating to public health, and allow the position of county health officer to be frequently filled by a cheap and incompetent person, we feel that the power to appointing county health officers should be rested in the State Board of Health with authority to remove them for neglect of duty.

SANITARY SUPERVISION OF RAILROAD PROPERTY.

Owing to the anticipated invasion of this country by Asiatic cholera it can be readily understood how essentially necessary it is that railroad property should be the subject of strict sanitary supervision.

Especially so, since they annually carry into and through our commonwealth thousands of immigrants from various parts of the world.

It is a fact thoroughly understood by sanitarians that such diseases as small-pox, typhoid fever, yellow fever and cholera follow the line of travel and commerce, and this is perhaps more particularly true of Cholera than of any of the diseases named.

Therefore, health officers should make it one of their important duties within the coming year to make frequent, thorough and complete examinations and inspections of buildings, grounds, and all other property belonging to railway corporations, and compel them to keep their property in good sanitary conditions.

There is a passenger and freight depot in nearly every hamlet and incorporated town in the State, which are annually visited by two-thirds of the population of these places and surrounding country.

These buildings, especially the passenger depots, should be properly located, heated, ventilated, cleaned and supplied with plenty of good, pure drinking water.

Urinals and water-closets should be suitably situated and

sufficient in number and capacity to accommodate the patrons of the roads.

They should at all times keep them clean and free from offensive odors, so that the senses of delicate and sensitive persons will not be offended. If stagnant pools and marshy places are present on the grounds, they should be drained and filled up with good, pure, uncontaminated earth, and as free from garbage and filth of every character as the private grounds of the owners. The source of the water supply, whether it be a spring, well, stream or lake, should be carefully and frequently examined, and should not be used if within sixty feet of a cess pool, privy vault or any other visible unsanitary conditions, as the liability to contamination is too great for perfect safety.

Whenever a privy-vault or cess-pool is found located within the above named distance of the water supply, it should be abandoned at once, thoroughly cleaned out and filled with any earth, which is always an excellent purifier for foul places, and new ones, properly constructed, substituted in their stead, situated at proper distances, made water-proof by being cement lined and kept clean and inoffensive by disinfection and ventilation.

Coaches used in the transportation of immigrant passengers should be well supplied with the latest and most improved ventilators and thoroughly cleaned and disinfected at the termination of each trip.

Saloon closets should be properly ventilated and kept free from all odors, the floors should be kept well oiled or painted, so that the soaking of moisture, urine, etc., into the wood may be prevented.

All character of passenger coaches should be thoroughly and well aired, the upholstering brushed, whipped and dusted, and their closets disinfected at least once each day.

Stock pens should be properly drained, kept dry and free from foul and offensive odors by the use of chloride of lime, or some other equally reliable disinfectant.

Dirty and filthy cattle cars should not be allowed to remain standing on the side tracks within the corporate limits of any town or city, or near any habitation. The greatest vigilance should be practiced by all health officers, to see that these suggestions are actively enforced.

SANITARY CONVENTION.

One of the best methods of disseminating information respecting preventable diseases, and of securing uniformity of procedure among health officers, is by means of sanitary conferences.

These should be held in different parts of the State, but owing to a lack of funds to defray necessary expenses, to which reference has been made elsewhere, this can not be done. However it was deemed advisable to hold at least one such convention, to which all health officers in the State were invited.

Accordingly on June 16, 1892, such a conference was held in the city of Indianapolis.

A synopsis of the proceedings is given herewith.

ANNOUNCEMENT.

"An Ounce of Prevention is Worth a Pound of Cure."

STATE BOARD OF HEALTH,
INDIANAPOLIS, IND., May 24, 1892. }

To Boards of Health:

GENTLEMEN—You are hereby notified that a conference of representatives of the Boards of Health will meet in the State House at 10 o'clock A. M., June 16, 1892.

The object of the conference is to increase the efficiency of the work of sanitation, by establishing the methods approved by this Board, of collecting vital statistics, statistics of sickness, repelling epidemics, an intelligent use of disinfectants, declaring nuisances, etc. In addition to these, other matters relating to public health will be considered. These meetings are made necessary, because of the frequent changes of health officers in some localities.

We would urge upon your Board the necessity of keeping in line with the advance of sanitary science elsewhere, that the spread of contagious and infectious diseases, the entrance of epidemics, the cause of local disorders be sought out, removed and prevented, and diseases abated by timely and intelligent measures.

These possibilities should enlist your active co-operation, in common with those of other Boards of Health in the State.

With these objects in view we respectfully urge you to send your Secretary and some other member of your Board to this conference, and ask that you allow them expenses incident to attendance. We make this appeal to you feeling that all intelligent people will approve of such action on your part.

Very respectfully,

JOHN N. TAYLOR, M. D.,
President.

C. N. METCALF, M. D.,
Secretary.

INDIANAPOLIS, IND., May 24, 1892.

DEAR DOCTOR—Enclosed herewith find announcement of meeting of Health Officers for June 16, 1892. We would respectfully ask you to present it to your Board of Health, as early as possible and secure their co-operation in making the conference a success.

Similar meetings held heretofore have resulted in great good to the work of sanitation in the State, and we confidently expect the same result in the future.

A program will be sent you in a few days, and it is hoped that those in attendance will be prepared to discuss the subject presented and thus contribute to the success of the meeting.

Will you come? A reply will be appreciated.

C. N. METCALF, M. D.,
Secretary.

PROGRAM

OF THE

Conference of Town, City and County Boards of Health, to be held in the State House, June 16, 1892:

1. Address by John N. Taylor, M. D., President of the Board.

2. Roll call, with brief statements of sanitary condition past and present.

3. Field water inspection for sanitary purpose with practical demonstration, by Prof. J. N. Hurty.

4. Quarantine of contagious and infectious diseases.

5. Disinfection, how accomplished.

6. Abatement of nuisances dangerous to the public health.
7. Inspection of poor asylums, jails, school houses and other public buildings.
8. Inspection of water and food supplies.
9. How to prevent the introduction of contagious diseases from one locality into another.

The President of the conference will designate persons to lead in the discussion of the foregoing subjects. It is hoped that all will be prepared to contribute to the success of the meeting.

C. N. METCALF, M. D.,
Secretary.

INDIANAPOLIS, May 26, 1892.

INDIANAPOLIS, IND., June 13, 1892.

DEAR DOCTOR—Upward of eighty cases of small-pox in Ohio, Pennsylvania and West Virginia towns and cities, and recent cases in Michigan and Illinois clearly indicates that this loathsome disease again threatens the citizens of our commonwealth after eight years of almost complete freedom from its ravages. The epidemic of eight years ago caused panic and quarantine, disturbed travel, traffic and business, closed schools and courts, caused a large number of deaths and involved a money loss to the people of many thousands of dollars.

As all of the trunk railway lines leading from the East to the West pass through our State there is great danger of an invasion of this terrible disease, it is therefore our duty to urge all local health authorities to co-operate with the State Board of Health in the enforcement of measures for the prevention and suppression of this and all other contagious, infectious and communicable diseases.

The attention of the conference of town, city and county health officers to be held in this city June 16 will be called to this matter, at which time it will be thoroughly discussed. Owing to the great importance of the business to be considered at this meeting it is hoped that your Board will not fail to send a representative.

Yours truly,
C. N. METCALF, M. D.,
Secretary.

ATTENDANCE.

The following were present :

D. J. Cummings.....	Houston.
J. F. Hibberd.....	Richmond.
Geo. A. Sigler.....	Liberty.
M. L. Hall	Newport.
C. Smith	Farmland.
H. Nebeker.....	Clinton.
J. H. Kerth.....	Evansville.
L. Worsham	Evansville.
J. W. Hall	Portland.
J. J. Thomas.....	Winamac.
J. A. Comstock.....	Greenfield.
W. A. Oyler.....	Argos.
C. M. Gravis.....	Martinsville.
C. K. Cox.....	Lynn.
J. R. Watson.....	West Lebanon.
R. S. McRay.....	Morristown.
Chas. Alford.....	Fortville.
B. B. Brannock.....	Jasper.
G. D. Brannon.....	Crown Point.
I. J. Baldwin	Brownsburg.
N. W. Cady	Logansport.
J. S. Arwine	Columbus.
G. W. Bence.....	Greencastle.
Marion Goss	Rockville.
F. L. Stone	Pendleton.
O. S. Deitch.....	Indianapolis.
W. A. McCoy.....	Madison.
J. B. Lytle.....	Marion.
J. Y. Lynch	Rosedale.
W. B. Chambers	Crawfordsville.
O. E. Avel.....	Winchester.
S. R. Clark.....	Otwell.
Aquilla Grist.....	Greenfield.
A. S. Dickey.....	Tipton.
J. D. Maxwell.....	Bloomington.
E. Hawkins	Greencastle.
C. E. Scholl.....	Camden.

A. F. Wright.....	Nineveh.
T. O. Armfield.....	Elwood.
H. F. Costello.....	Decatur.
A. W. Spain	Terre Haute.
John Perry.....	Shelbyville.
H. K. Myers.....	Edinburg.
F. R. Stiers	Red Key.
E. G. Regennas.....	Hope.
O. W. Edwards.....	Frankfort.
S. B. Sims.....	Frankfort.
C. J. Lora.....	Dillsboro.
V. E. Loughridge	Rensselaer.

DISINFECTION.

Dr. Jas. F. Hibberd said :

There are only two ways to arrest the spread of contagious diseases: First, to prevent the contagion coming in contact with the people; second, to have people in such condition that though coming in contact with contagion they are able to resist it.

People of the second class are such either by nature or by artificial preparation. A considerable number of persons in every community are exempt all their lives from such contagious diseases as visit their neighbors, due to some natural condition of which we know nothing and which we can recognize only when such fortunate ones have passed unscathed through repeated epidemics.

Fortunately one attack of contagious diseases confers immunity against a subsequent attack of the same; for example: Small-pox, yellow fever, typhoid fever, measles, mumps, and the like.

Exemption thus conferred is not always absolute, for second attacks of each of them have been observed and occasionally even a third or more. But the rule is that in the diseases referred to one attack makes the victim immune from further attacks.

In the case of small-pox, perhaps the most generally contagious disease among humans and one of the most fatal, we have a means of prevention in vaccination; that is, by producing cow-pox in a person we secure such person against the small-pox as certainly as small-pox secures against itself.

Experienced investigations are now going on in various parts of the enlightened world that promises to establish means of preventing other contagious diseases, but at present it is only a promise and we must rely on existing knowledge for preventing the spread of contagious diseases until these investigations have made further progress.

Existing knowledge demands that a person attacked with a contagious disease should be separated at once from other persons liable to the disease; that is, placed in quarantine, as it is called.

In private families this consists in placing the patient in a room that can be shut off from the other parts of the house and kept there until he is well of the contagious disease, and meanwhile no one should be admitted to the room except the nurse and the doctor. This quarantine room should be prepared for the occasion by stripping it of carpet, curtains and all fabrics not necessary for the welfare of the patient. All bedding, towels and other fabrics used about the patient should be disinfected as soon as they cease to be used, either by boiling or soaked in a disinfecting fluid. When the patient has recovered, and after proper bathing is dressed in uncontaminated clothes and discharged, the room must be disinfected and while there are several methods of doing this, the most feasible one for private families is sulphur fumigation. To do this, stop up every hole, crack and crevice in the room, giving particular attention to windows and doors. Hang the bedding, clothing and all fabrics needing disinfection on chairs, bedsteads, hooks or nails, or in any way that the air can get on all sides of them—nothing should be in rolls or close bundles. Place a common wash tub in the room and in it put four or five inches of water and in the water bricks that will support an iron pot above the water. In this iron pot put broken roll sulphur, three pounds for 1,000 cubic feet of space in the room. Suppose a room is 14 feet square with 10 feet ceiling; this would contain 1,960 square feet and would require six pounds of sulphur. Hang some wet sheets, towels or other fabrics about the room. All being ready, pour a little alcohol over the sulphur to insure a good start to the burning, touch a match to the alcohol, hasten out of the room and close the door, the sulphur will burn until all the oxygen is consumed, the atmosphere will be displaced and the room filled with the fumes of the burning

sulphur and this will kill every living thing which is immersed in it. Keep the room closed say for four hours, then open and ventilate and clean thoroughly as you would any other room that was foul and dirty. If these directions have been effectively carried out, such a room may be occupied at once with as much safety as though a contagious disease had never been in it.

The following from Dr. Lindsley was presented by Prof. D. N. Berg:

ABOUT DISINFECTION.

Can anybody disinfect? Yes, in the same sense that anybody can dress a wound, or put out a fire.

But if the wound is a serious and dangerous one, the skill and anatomical knowledge of the surgeon is needed. So anybody can throw a pail of water on a blaze just starting, and put it out, but if the house is well on fire the apparatus, practical skill and trained intelligence of the firemen are required to extinguish it. In like manner anybody can throw a bundle of soiled linen from a small-pox patient into a tub of disinfectant solution, or set on fire a few pounds of sulphur; but if the patient has been in the house some time sick so that the infection has permeated the atmosphere of the house, and the contents of the house, is charged with it, there is the like necessity for the exercise of intelligence and trained experience to disinfect successfully, as in conflagrations or fractured limbs.

What is disinfection? It is the destruction of the infection. If there is no infection, there can be no disinfection. The object of disinfection is to kill the germ which causes the disease. Success depends upon the effectual application of the germicides to *all* the germs, wherever they may be. I repeat the disinfectants must reach *all the germs*, or the attempt is a failure—those not brought in contact with the agents employed, maintain their vitality and renew the disease on fresh subjects. Partial disinfection is not disinfection. As well may a fire company extinguish the flames in one part of a house and leave another part burning.

No health officer does his whole duty who trusts any family in which there has been contagious disease to disinfect their own house. However intelligent they may be, however resolute in purpose to do it, and do it well, still not once in ten

times will they do it thoroughly, merely because they *can not* do it.

Try the experiment. If you are a merchant, set your cleverest clerk to some task entirely out of his usual line of thought and work ; it may be something very simple requiring only ordinary intelligence and that rare quality so erroneously called *common sense*, give him careful instructions how to do it, and nine times in ten he will fail at the first attempt.

It is a very easy, simple thing to ride a bicycle—when you have learned how.

I have never known an instance of a person disinfecting thoroughly his own house, unless under the personal supervision and direction of an expert during the process.

Every health officer ought to have one or more persons to do all the work of disinfection in his jurisdiction, and after some practice and experience they will learn how to do it successfully.

The spread of contagion is due more to imperfect disinfection than to any other single thing.

C. A. LINDSLEY,
Secretary of State Board of Health, and
Superintendent of Vital Statistics.

MEASLES.

Dr. J. F. Hibberd introduced the following resolution, which, after discussion, was adopted :

Resolved, That it is the sense of this conference that it is not necessary to quarantine or flag measles.

Dr. McCoy :

MR. PRESIDENT—I am glad Dr. Hibberd made this motion for the reason that I do not believe it always desirable to prevent children from contracting the disease.

We know that in childhood it is not ordinarily a dangerous disease. I can not agree with the gentleman over there who stated that it was more dangerous in childhood than in adult life. My observation and reading both teach me it is much more dangerous in adult life, and as the child can not hope to get through life without it, it is much more desirable to have it in childhood ; and, from my standpoint, no child's education is complete until he has had the measles.

I do not mean that I would intentionally send him into it, but I would not send him very far out of his way to avoid it, if in good health and conditions favorable.

It is entirely different with diphtheria and scarlet fever. They reap their richest harvest from among the children, there being comparatively few cases among adults, so that when childhood is well passed without these diseases, he is comparatively safe, as susceptibility ceases in a large measure. Not so with measles. There is no time during life, until he has had it, that susceptibility ceases.

Besides, it is practically useless to try to quarantine it, as the people will not report it, so that as the matter now stands the law is a dead letter, and worse than no law.

For these reasons I am in favor of lifting the quarantine.

Dr. N. W. Cady, of Logansport, said :

Mr. President and Gentlemen :

There is no doubt whatever in my mind that quarantine does quarantine. Last winter and spring there was an outbreak of scarlet-fever and measles in Logansport, and the different results reached strikingly illustrate the difference between quarantine and non-quarantine. It has not been customary to flag houses in which are cases of measles, or to make any effort whatever to restrict it. The disease appeared first on Biddles Island among some children attending the southside school. So little care was exercised by parents that cases had to be sent home from school, with the eruption fully developed.

In a short time the disease spread to all the schools, and I have the testimony of many of the teachers that at one time fully half of their pupils were out of school on account of measles.

On the other hand, cases of scarlet-fever were promptly reported to the Board of Health, the houses carded and the rest of the children excluded from the public schools. To make this part of the quarantine doubly sure, the Superintendent of Schools received a daily report from me giving names of the children, the number in the family, and the school attended, together with the order that their children be excluded from the public schools six weeks from date, or until the Board should receive satisfactory evidence that there was no longer any danger of contagion.

The same rule was followed with diphtheria. As a result, scarlet fever and diphtheria never obtained a foothold in the schools.

I believe further that measles ought to be quarantined; for while it is usually mild, some epidemics are attended by great mortality.

SCARLET FEVER.

A motion was made fixing the maximum time for quarantining scarlet fever at six weeks and the minimum time at four weeks.

After considerable discussion this motion was amended or changed so as to fix the time "until desquamation has fully taken place," and in this form was adopted.

Dr. W. A. Oyler, Argus, Ind., said:

MR. PRESIDENT—I have had considerable experience with scarlet fever in three localities. First at Bunker Hill, Miami County; then at Pulaski, Pulaski County, and at Argus, where I have been about nine years.

About five years ago scarlet fever was brought there (Argus) by a family from Peru. The doctors disagreed in their diagnosis, but they kept the patients in and quarantined them for a few days, and finally they commenced peeling off. I did not see them until after they were out, and I was certain it was scarlet fever. In about a month or a little longer some others took it, but in rather a mild form. The doctor said it was only a rash and allowed it to spread. Finally I was called to see the daughter of Mr. B., about ten years old. She was suffering with sore throat, temperature 102. I told them I thought she had scarlet fever and if so she would be broken out by the next day with a rash. On the following day I called to see her and found it a well marked case. I at once notified the Secretary of the Board of Health, but he said it was only a rash; that he had similar cases. I was called to see the children in three or four other families, and reported the cases as scarlet fever, but the Secretary again called it a rash and in some cases told them they were broken out with heat. I told him he would get some cases of "rash" that he could not manage, and in a few days Mr. M.'s son took the same disease and the same doctor pronounced it rash. The parents, becoming dissatisfied, called

a physician from Plymouth, who at once pronounced it scarlet fever in its most malignant form. The child died the next day.

I kept on reporting my cases, forty-three in all, and had only one death.

The Secretary of the Board at that time still insists that there was no scarlet fever.

Now in regard to quarantine: there is more difficulty in stopping the spread of scarlet fever than any other contagious or infectious disease, for the reason that it is not contagious during the fever, but during the stage of desquamation, and the parents want their children to go out and go to school as soon as they are able to eat. They think they are well and sometimes they go out when the weather is cold and damp, take cold and they die. Scarlet fever patients, whether mild or malignant cases, should be anointed once a day at first, then every other day, and finally every three or four days for three or four weeks with a preparation of glycerine, carbolic acid and borate soda.

During an epidemic of scarlet fever any case, no matter how mild it is should be quarantined just as perseveringly as the most malignant ones. The severe cases remain in and the mild cases usually spread the disease. By doing this we will soon succeed in getting the disease under control. I find difficulty in getting doctors to report the mild cases. They say (some of them) that they are afraid of offending parents or neighbors, so they call it rash and let it go at that. I believe some doctors are unscrupulous enough to pass those mild cases by, in order that the disease may spread and increase their practice. I believe all so-called cases of "rash" ought to be quarantined, especially during the prevalence of scarlet fever, and failure to do so ought to be severely punished by statute.

Dr. L. Worsham said :

MR. CHAIRMAN—This question in my judgment is the most important that will come before this convention. The spread of contagious diseases can only be prevented by rigidly quarantining those affected. The statistics of mortality quoted here are appalling enough to awaken each health officer present to a realization of the importance of insisting and enforcing, by the aid of a police officer, a complete isolation of the families in which there is a contagious disease. It should be our duty to

educate the laity of the danger to life lurking in a simple case of scarlet fever.

Let us make it universally known that scarlatina, scarlet rash, etc., is nothing more or less than scarlet fever. When we can convince the people that mild cases can and do produce fatal results, then we will be able more perfectly to prevent intercourse between the sick and the well. All cases reported under whatsoever name, to deceive the people, and allay apprehensions, should be flagged in letters that "he may read who runs," SCARLET FEVER.

The children belonging to a family in which there is a contagious disease should be kept from school for two weeks after the house has been fumigated. I contend that no fixed rule can be established in days and weeks, when the quarantine shall be relieved, other than the evidence furnished by a complete desquamation that the patient is perfectly well. Funerals of those dying from contagious diseases should be *strictly* private.

The enforcement of this rule will offend some, but it will save the lives of many precious little ones, and we will have the consciousness of having faithfully discharged our duty as health officers.

Dr. J. S. ARWINE said :

Mr. President and Members of the Convention :

In my county, Bartholomew, the indifference of physicians to the law and rules of the State Board, presents the greatest difficulty to be overcome in establishing a quarantine of contagious diseases, especially of scarlet fever. Some of them would apparently much rather please their patrons than protect the public from ravages of disease, and when called to cases of scarlet fever in its simple form, they say, "No danger; it is nothing but scarlatina," instead of saying, "It is scarlet fever; and from this case may spring the most malignant form of the disease and no one should pass or repass from the sick room."

One physician when asked why he did not flag a certain house, plead as an excuse that he did not think it necessary, that he believed it to be a blending of measles and scarlatina, and not dangerous to the public.

Scarlet fever has prevailed over our county to some extent during the past year, but it has been attended with but little

mortality, and it appears to me to be somewhat different in character from former epidemics, two of which I remember to have passed, and how to account for it I do not know unless our advancing civilization has changed the constituents of our bodies, and in this way modified the disease.

Dr. W. A. McCoy, of Madison, Ind., said :

MR. PRESIDENT—We have not been entirely free from scarlet fever in our county for a number of months. Our method of dealing with it is by isolation, but I am persuaded not all the cases of it are reported.

There seems to be such an antipathy with some people to having a flag on their house that they would rather jeopardize the lives or health of their neighbors than have a flag displayed; and I regret to say it, but there are physicians who will listen to their pleadings and not report their cases. I wish to speak of a fallacy that has obtained quite a footing among the laity, and the profession is not without fault in that direction, or at least certain of them encourage the error. I allude to making a difference between “scarlatina” and “scarlet fever.” They hold, or pretend to hold, that scarlatina is a trivial matter, and unworthy of much concern, while scarlet fever is to be regarded as a serious malady, thus creating two distinct types of the disease, if not distinct diseases.

Such a hold had this doctrine obtained in our county that some months ago I deemed it my duty to card the public through the public prints, calling attention to the error and explaining that the terms were synonymous and interchangeable, and that a difference was liable to work disastrously. Up to that time the Madison (city) Health Board had been in the habit of displaying “scarlatina” flags, but it was thought best to change to “scarlet fever” and thus assist in correcting the mistaken notion.

Dr. Metcalf, of Indianapolis, said :

Mr. President and Gentlemen :

It is the practice everywhere where Boards of Health exist to quarantine all persons sick with small-pox, yellow fever, cholera and also those that have been exposed to the disease and maintain a strict surveillance over them. Since the creation of the State Board of Health our State has not been visited either by cholera or yellow fever, but there have been

several outbreaks of small-pox which were suppressed by the strict enforcement of the regulations of the Board of Health.

In all cases strict quarantine was maintained, vaccination of the exposed was enforced and all infected premises and contents disinfected.

If the health authorities had not taken prompt action and used every means within their power to suppress the disease, all classes of citizens would have been up in arms, and the public press would have condemned the negligent health officers, and demanded that their places be filled by competent men who would not be afraid to do their duty by enforcing the laws and health regulations of the State and thereby protect the people from the ravages of the pestilential disease. Small-pox is no longer a terror to health boards because they know how to manage and control it.

Since the organization of the State Board of Health (nearly eleven years) there has been reported only 379 deaths from this disease in the State and not one within the past four years.

How many deaths have we had from some other contagious and infectious diseases, that are preventable by the maintenance of a strict quarantine and the employment of thorough disinfection and fumigation, for instances the diseases scarlet fever and diphtheria?

Since the State Board of Health's organization there has been reported 1,527 deaths from scarlet fever a little more than four times as many as reported from small-pox. During the same period there have been 3,727 deaths reported as having been caused by diphtheria, nearly nine and a half times as many more than from small-pox.

Diphtheria is now recognized as a contagious, infectious, communicable and preventable disease, whose contagion has the power of clinging to clothing, furniture, dishes, books, papers and in fact everything that it comes in contact with.

According to a report of a committee of the American Public Health Association, submitted to that body at its meeting held in Charleston, S. C., 1890, the mortality rate from this disease, in the United States and Canada, was fixed at forty per cent. This conclusion was reached after a most thorough and exhaustive investigation.

If you will make a careful examination you will be convinced that the mortality from this disease is as great as that from

small-pox, yellow fever or cholera. Jacobi, of New York, is authority for the statement that "in some epidemics it reaches 95 per cent."

Now, gentlemen, here is a disease that is attended with a terrible death rate and is almost constantly with you, recognized, as we said before, as a contagious, infectious communicable and preventable disease.

What are you doing as health officers to exterminate it and prevent its destruction of human life?

Do you quarantine every case and all that have been exposed to the disease?

Do you recognize the fact that the mildest case may communicate the disease in its most virulent form?

After recovery or death of the patient, do you see to it that the premises are disinfected and fumigated in accordance with the most improved methods?

In case of death, do you see to it that the funeral is strictly private?

If you do not, you are not doing your duty as health officers, and should surrender your position to others who have the intelligence and moral courage to enforce the health laws and regulations of the State.

Until the time comes when the people can be educated up to the realization of the fact that this is both a contagious and a preventable disease, and that by proper precautions being taken it can be stamped out, we will have it with us annually, carrying hundreds of victims to untimely graves.

CONTAGIOUS DISEASES.

On motion of Dr. Hibbred, the State Board of Health was requested to specify all contagious and infectious diseases, instead of saying as now, "small-pox, diphtheria, scarlet fever, measles and other contagious and infectious diseases;" which motion was adopted.

THE CHEMISTRY OF BREAD—ITS AVAILABILITY AS AN ARTICLE OF DIET CONSIDERED.

IN CERTAIN PROPERTIES REQUIRED BY THE HUMAN SYSTEM IT IS
DEFICIENT—FRESH BREAD NOT SO GOOD AS THAT
WHICH IS OLDER—CRUST.

While discussing the benefits derived by the human system from the different kinds of food used by the people of this age, J. N. Hurty, the chemist, said :

“It is a physiological truth that man can not live by bread alone, and especially is it true of our bread made from fine patent flour. Even the whole wheat flour is deficient, not, however, in those elements necessary to support life, but in the right proportion to form a proper food. If we were to try to live upon bread alone, we would be compelled, owing to the proportion of the ingredients, to eat too much starch to get enough protein. Protein is the chemical name for a class of food elements which contain nitrogen, and nitrogen the animal organism must have every day in order to maintain vigor and strength. Starch and sugar are fuels, and if an undue amount of starch (fuel) be taken, it is easy to see that the economy will burn out .

“To make the demonstration plain, that bread, or bread and water only, will not support life, a few interesting figures are necessary. Physiology has shown that a man doing a fair day's work requires : Dry protein, 4.5 ounces ; starch and like substances, 14.25 ounces ; fat, 3 ounces ; mineral matter, 1 ounce. Total, 22.75 ounces of dry food. This quantity (22.75 ounces of dry whole wheat bread) contains, protein, 3.4 ounces ; starch, 18.6 ounces ; fat, 0.4 ounces. It is obvious then, that there is here a deficiency of 1.1 ounce of protein, 2.6 ounces of fat and a surplus of 4.1 ounces of starch. These differences are still greater with fine wheat bread, for its deficiency in protein is 1.8 ounce ; fat, 2.7 ounces, and the surplus of starch, 5.15 ounces. To try to live solely on wheat bread, then, would result in nitrogen starvation, and this starvation would be greater in the same length of time if fine flour bread were used.

“It thus appears that the starch, protein, fat and salts in wheat are there in the right proportion to support the little baby wheat plant that lies so neatly ensconced in their midst, and that as an article of food for us it forms only an incident. We have discovered, without the aid of science, that bread is deficient in fat as

a food for us, and so we spread it with butter. We also have discovered, as we 'blundered on through love and hunger,' that bread is more satisfying when associated with a little meat, beans, cheese, peas, milk or other nitrogenous foods. It is plain that although bread alone is not sufficient to support vigorous life it still deserves the grand title of the 'staff of life,' and those who are supplied with a variety of nutritives may rest assured that their health will not decay because they eat fine flour. With that class, however, whose chief article of diet is bread, the situation is very difficult.

"In my studies of bread in this city I have found many families where the sole food for children was bread and a miserable, low grade of molasses. When these children become adults they will, of course, be poorly made up, and must, by necessity, fall into the deficient and dependent class, and then we will build poor houses and insane hospitals for them. At our groceries we find on sale twenty to thirty different varieties of bread. Many of these varieties are of the same kind, the difference appearing in the shape of the loaf and its name. Crust is an important feature in the dietetic value of a loaf of bread. In the crust a desirable chemical change is effected by the heat. The starch is partly converted into dextrin and sugar, making it more soluble and digestible, and because of its nature it requires more thorough mastication. It can't be rolled up by the tongue and swallowed with a gulp of water, but must be well chewed, thus insuring the thorough admixture of the saliva, which is the sole digestive for it. Crust, however, is avoided by many, much to their disadvantage. Especially do the poor avoid crusted bread, for I am informed by many large bakeries that the outside crusted loaves are always returned to them, and they sell them for hog feed.

"In this city, and in all western cities, bread a day old is returned to the big steam bakeries as stale. This is not so in the sea-board cities and in Europe. Bread is all the better for being a day or two old, as chemistry can prove, and in the localities last named this fact has been discovered by experience. A fresh loaf certainly has a delightful flavor and is very toothsome, which qualities are absent to a degree, in bread one or two days' old. But the old bread, by standing, has grown in digestibility and is more manageable in mastication, and on account of certain complex chemical changes is a superior food.

In Boston, their favorite brown bread, like their beans, is always ripened a day or two before it can be sold.

"The old rhyme—

Bean porridge hot,
Bean porridge cold;
Bean porridge in the pot
Nine days' old,

Tells the story. Fresh boiled beans, like fresh bread, have an attractive flavor to many people, but upon standing, properly protected for a few days, they acquire a new flavor just as attractive as the fresh flavor, and they are sweeter and more digestible, and in every way a better food. Chemistry did not teach to mankind the desirability of nine-days'-old bean porridge, but it now can tell us why it is better."

"A completely-cruste'd, well-baked loaf, when not less than a day old, is the ideal bread. It is an interesting fact that bread is made light and porous through the agency of micro-organisms (microbes), for such is yeast. The yeast plant—its name is *torula cerevisiæ*—grows at the expense of certain elements in the flour, and, as a product of its life's processes, gives off a compound gas, called carbon dioxide, and it is this gas which, in trying to escape, makes the air cells in the bread, and thus imparts lightness. The dough must be put in the oven before it commences to go down, or a soggy, heavy bread is the result, and the heat must be continued for a sufficient length of time to thoroughly kill the yeast, and transform the protein and other components. The most difficult bread to make is that made from whole wheat flour, and while this kind is the most desirable it may be that the trouble involved in its production is the reason it is not more largely used. To succeed, the whole wheat flour must be re-cut and made fine. The dough must be extra well-kneaded, and must be made with quick fermentation, and the baking well done. The advantages of fine whole meal bread may be thus summarized: (1) The proportions of the various food stuffs yielded to the body are nearly those of a perfect diet. (2) It furnishes the body with a larger quantity of the valuable alkaline phosphates and iron. (3) It is far more thoroughly and easily digested than ordinary fine meal bread. (4) It stimulates the bowels to healthy activity without undue irritation. All of these points commend fine whole-meal bread, and the last demands especial consideration, since persistent constipation has become the bane of modern life."

LEGISLATIVE COMMITTEE.

The following was adopted:

Resolved, That a committee of five be appointed, which shall be called a Legislative Committee, whose duty it shall be to consider necessary amendments to health laws and present the same to the next session of the Legislature.

Drs. G. W. Bence, J. F. Hibberd, N. W. Cady, J. W. Hall and L. Worsham were appointed such committee.

Adjourned.

D. N. BERG,
Secretary.

L. WORSHAM,
President.

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AND MEXICO, 1892.

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Louisiana.

Dr. S. R. Oliphant, 466 Magazine St., New Orleans, President ; Dr. Lucien F. Salamon, 63 Carondelet St., New Orleans, Secretary ; Dr. F. Formento, 81 Esplanade St., New Orleans ; Dr. Geo. K. Pratt, 152 Prytania St., New Orleans ; Dr. C. E. Kells, 12 Dauphine St., New Orleans ; Col. J. D. Hill, 110 Carondelet St., New Orleans ; Mr. I. H. Stauffer, Jr., 19 Tchoupitonas St., New Orleans ; Mr. B. M. King, 212 Gravier St., New Orleans ; Dr. C. P. Wilkinson, 57 Prytania St., New Orleans.

Maine.

E. C. Jordan, C. E., Portland, President ; Dr. A. G. Young, Augusta, Secretary ; Dr. O. A. Horr, Lewiston ; Dr. J. O. Webster, Augusta ; Hugh R. Chaplin, Esq., Bangor ; Prof. F. C. Robinson, Brunswick ; Dr. C. D. Smith, Portland.

Maryland.

Dr. Jackson Piper, Towson, President ; Dr. C. W. Chancellor, Baltimore, Secretary ; J. Crawford Neilson, C. E., Baltimore ; Dr. J. M. H. Bateman, Easton ; Dr. John Morris, Baltimore ; Dr. James F. McShane, Health Commissioner of Baltimore City, Baltimore ; Hon. Jno. P. Poe, Attorney General, *ex officio*, Baltimore.

Massachusetts.

Dr. Henry P. Walcot, Cambridge, Chairman; Dr. Samuel W. Abbott, 18 Beacon St., Boston, Secretary; Dr. Elijah U. Jones, Taunton; Dr. Frank W. Draper, Boston; Hiram F. Mills, C. E., Lawrence; Dr. Joseph W. Hastings, Warren; J. M. Raymond, Esq., Salem; Gen. Morris Schaff, Pittsfield; F. P. Stearns, C. E. Engineer.

Michigan.

Dr. John Avery, Greenville, President; Dr. Henry B. Baker, Lansing, Secretary; Dr. Arthur Hazlewood, Grand Rapids; Dr. Victor C. Vaughan, Ann Arbor; Prof. Delos Fall, Albion; Dr. Mason W. Gray, Pontiac; Hon. Frank Wells, Lansing.

Minnesota.

Dr. Franklin Staples, Winona, President; Dr. Charles N. Hewitt, Red Wing, Secretary; Dr. Vespasian Smith, Duluth; Dr. E. J. Davis, Mankato; Dr. W. H. Leonard, Minneapolis; Dr. J. H. Phillips, Preston; Dr. P. H. Millard, St. Paul.

Missouri.

Dr. J. D. Griffith, Kansas City, President; Dr. G. A. Gohen, Kirksville, Vice-President; Dr. R. C. Atkinson, St. Louis, Secretary; John P. Harmon, Holden, Treasurer; Dr. Albert Merrill, St. Louis; Dr. George Homan, St. Louis.

Nebraska.

Dr. J. V. Beghtol, Friend, President; Dr. C. F. Stewart, Auburn, Vice-President; Dr. F. D. Haldeman, Ord, Secretary; Dr. E. T. Allen, Omaha, Treasurer; J. M. Thayer, Lincoln, Governor; George H. Hastings, Lincoln, Attorney-General; A. K. Goudy, Superintendent Public Instruction.

New Hampshire.

Dr. G. P. Conn, Concord, President; Dr. Irving A. Watson, Concord, Secretary; Gov. Hiram A. Tuttle, Pittsfield, *ex officio*; Attorney-General E. G. Eastman, Exeter, *ex officio*; Hon. James A. Weston, Manchester; Dr. John J. Berry, Portsmouth.

New Jersey.

Dr. C. F. Brackett, LL. D., Princeton, President; Dr. Ezra M. Hunt, LL. D., Trenton, Secretary; E. A. Osborn, C. E., Middletown, Recording Clerk; Hon. Henry C. Kelsey, Secretary of State, *ex officio*; Hon. John P. Stockton, LL. D., Attorney-General, *ex officio*; John Smock, Ph. D., State Geologist, *ex officio*; Dr. E. R. O'Reilly, Elizabeth; Dr. Laban Dennis, Newark; Dr. Franklin Gauntt, Burlington; Prof. A. R. Leeds, Ph. D., Hoboken.

New York.

Hon. Thomas Newbold, Hyde Park, President; Dr. Lewis Balch, Albany, Secretary; Dr. William E. Millbank, Albany; Dr. Thomas S. Dawes, Saugerties; Dr. Joseph D. Bryant, New York; Dr. F. O. Donahue, Syracuse; Simon W. Rosendale, Attorney-General, *ex officio*; Dr. Wm. T. Jenkins, Health Officer, Port of New York, *ex officio*; Dr. Maurice Perkins, Schenectady.

North Carolina.

Dr. H. T. Bahnson, Salem, President; Dr. Thomas F. Wood, Wilmington, Secretary and Treasurer; Dr. R. H. Lewis, Raleigh; Dr. J. M. Baker, Tarborough; Dr. J. A. Hodges, Fayetteville; Dr. S. Westray Battle, U. S. N., Asheville; Dr. J. H. Tucker, Henderson; Prof. F. P. Venable, Chapel Hill; J. L. Ludlow, C. E. Winston.

North Dakota.

Hon. C. A. M. Spencer, Grafton, President; Dr. M. O. Teigen, Fargo, Vice-President; Dr. F. H. DeVaux, Valley City, Superintendent.

Ohio.

Dr. H. J. Sharp, London, President; Dr. C. O. Pröbst, Columbus, Secretary; Dr. Thomas C. Hoover, Columbus; Dr. William T. Miller, Cleveland; Dr. A. J. Scott, Loudonville; Prof. E. T. Nelson, Delaware; Dr. Simon P. Wise, Millersburg; Dr. S. A. Conklin, Canton.

Oklahoma Territory.

J. H. Lawhead, Guthrie, President; Dr. C. F. Waldron, Oklahoma City, Vice-President; Dr. J. A. Overstreet, Kingfisher, Secretary.

Pennsylvania.

Dr. J. H. McClelland, Pittsburgh, President; Dr. Benj. Lee, Philadelphia, Secretary; Dr. Pemberton Dudley, Philadelphia; Dr. Samuel T. Davis, Lancaster; Dr. J. F. Edwards, Philadelphia; Howard Murphy, C. E., Philadelphia; Dr. Geo. G. Groff, Lewisburg.

Rhode Island.

Dr. A. G. Sprague, River Point, President; Dr. C. H. Fisher, Providence, Secretary; Dr. P. S. Redfield, Providence; Rev. Geo. L. Locke, Bristol; Dr. A. B. Briggs, Hopkinton; Dr. Peter F. Curley, Newport; S. U. Gray, C. E., Providence.

South Carolina.

Dr. J. R. Bratton, Yorkville, Chairman; Dr. H. D. Fraser, Charleston, Secretary; Dr. P. A. Wilhite, Anderson; Dr. T. Grange Simons, Charleston; Dr. C. R. Taber, Fort Motte; Hon. J. L. McLaurin, Attorney-General *ex officio*; Hon. W. H. Ellerbe, Comptroller General *ex officio*; Dr. A. A. Moore, Camden; Dr. James Evans, Florence.

South Dakota.

C. B. Alford, Huron, President and Superintendent; Dr. D. W. C. Fowler, Aberdeen, Secretary; Dr. D. W. Robinson, Pierre.

Tennessee.

Dr. J. D. Plunkett, Nashville, President; Dr. James M. Safford, Nashville, Vice President; Dr. J. Berrien Lindsley, Nashville, Secretary; Hon. E. W. Cole, Nashville; Dr. F. L. Sim, Memphis; Hon. D. P. Hadden, Memphis; Dr. P. D. Sims, Chattanooga; Dr. Daniel F. Wright, Clarksville.

Texas.

Dr. Robert Rutherford, Houston, State Health Officer.

Vermont.

Dr. C. S. Caverly, Rutland, President; Dr. J. H. Hamilton, Richford, Secretary; Dr. O. W. Sherwin, Woodstock.

Washington.

Dr. N. Fred. Essig, Spokane, President; Dr. G. S. Armstrong, Olympia, Secretary; Dr. J. R. Hathaway, Fairhaven; Dr. J. B. Eagleson, Seattle; O. A. Bowen, Olympia.

West Virginia.

Dr. Wm. P. Ewing, Charleston, President; N. D. Baker, Martinsburg, Secretary; Dr. Wm. M. Late, Bridgeport; Dr. L. D. Wilson, Wheeling; Dr. B. F. Irons, Pickaway; Dr. B. H. Hoyt, Ravenswood; Dr. L. S. Brock, Morgantown; Dr. T. P. Carpenter, Poca.

Wisconsin.

Dr. Solan Marks, Milwaukee, President; Dr. J. T. Reeves, Appleton, Secretary; Dr. S. C. Johnson, Hudson; Dr. A. D. H. Thrane, Eau Claire; Dr. C. H. Marquardt, La Crosse; Dr. U. O. B. Wingate, Milwaukee; Dr. F. H. Bodenius, Madison.

Provincial Board of Health for the Province of Ontario.

Dr. Francis Rae, Oshawa, President; Dr. Peter H. Bryce, Toronto, Secretary; John T. Cassidy, Toronto, Chairman; Dr. Charles W. Covernton, Toronto; Dr. H. E. Vaux, Brockville; Dr. John Duff MacDonald, Hamilton; Dr. E. E. Kitchen, St. George.

Board of Health of the Province of Quebec.

Dr. E. P. Lachapelle, 76 St. Gabriel Street, Montreal, President; Dr. Elzéar Pelletier, Montreal, Secretary; Dr. J. H. Beaudry, Montreal, Medical Inspector of Health; H. R. Gray, Montreal; Dr. C. E. Lemieux, Quebec; Dr. J. B. Garneau, Ste. Anne de la Pérade, Montreal; Dr. R. Craik, Montreal; Dr. R. Fiset, Rimouski.

Provincial Board of Health of New Brunswick.

Dr. William Bayard, St. John, Chairman; Dr. John Z. Currie, Fredericton, Secretary; Hon. Judge Steadman, Fredericton; Hon. James Holly, St. John; Dr. George E. Coulthard, B. A., Fredericton; Dr. George H. Coburn, Fredericton.

THE EIGHTH ANNUAL MEETING OF THE NATIONAL CONFERENCE OF
THE STATE BOARDS OF HEALTH WAS HELD IN THE CITY OF
LANSING, MICHIGAN, ON JUNE 6 AND 7.

Promptly at 10 A. M., on the morning of June 6, the members met in the Senate Chamber of the State Capitol. In the absence of the President, Dr. J. N. McCormack, Dr. Pinckney Thompson, President of the Kentucky State Board of Health, was called to the chair.

Dr. Henry B. Baker read a telegram received from Dr. C. O. Probst, Secretary of the Conference, which stated that he is unable to come on account of an outbreak of small-pox in Ohio, and that he would be compelled to remain within the limits of that State.

Upon the receipt of this information Dr. C. N. Metcalf, of Indiana, was elected Secretary *pro tem*.

Hon. Frank Wells, of Lansing, a member of the Michigan State Board of Health, welcomed the delegates to the city on behalf of its citizens, and invited them to visit the various public institutions located in its vicinity. Dr. McCormack responded, saying that the Conference would be pleased to accept the kind invitation if time would permit.

The Secretary was directed to call the roll, which showed that sixteen States and two Provinces of the Dominion of Canada were represented as follows:

Alabama—Dr. Jerome Cochran.

Colorado—Dr. Wm. P. Munn.

Connecticut—Dr. C. A. Lindsley.

Indiana—Dr. Samuel R. Seawright.

Dr. C. N. Metcalf.

Iowa—Dr. J. M. Emmet.

Kansas—Dr. H. D. Hill.

Kentucky—Dr. J. N. McCormack.

Dr. Pinckney Thompson.

Dr. Geo. Beeler.

Louisiana—Dr. L. F. Salamon, Felix Formento.

Massachusetts—Dr. Henry P. Walcott.

Michigan—Dr. Henry B. Baker, Dr. Victor C. Vaughn.

Dr. F. G. Novia, Dr. Arthur Hazelwood.

Hon. Frank Wells, Prof. Delos Fall.

Dr. John Avery, Dr. Mason W. Gray.

New Hampshire—Dr. Irving A. Watson.

North Dakota—Dr. F. H. DeVaux, Dr. M. O. Teigen.

Pennsylvania—Dr. Benjamin Lee.

Tennessee—Dr. J. Berrien Lindsley.

Vermont—Dr. J. H. Hamilton, Dr. C. S. Caverly.

Wisconsin—Dr. J. T. Reeve, Dr. U. O. B. Wingate.

Dr. J. C. Johnson.

Province of Ontario—Dr. P. H. Bryce.

Province of Quebec—Dr. E. Persillier, Lachapelle.

The first question discussed was the one proposed by the Provincial Board of Ontario.

(a) Has Intra-State, Inter-State and International action to prevent the sewage pollution of streams become a necessity?

(b) If so, what steps are practicable for bringing about conjoint action?

(c) What practical methods are available for preventing such pollution?

Dr. Benjamin Lee, of Pennsylvania, and Dr. P. H. Bryce, of Ontario, opened the discussion as follows:

GOVERNMENTAL RESPONSIBILITY FOR THE PROTECTION OF WATER SUPPLIES.

The question of the pollution of streams and other sources of water supply on this continent is rapidly assuming the greatest gravity. It is curious to notice how in this, as in moral and social problems, we are gradually making the discovery that America is after all not very different from the rest of the world, and that measures which have been found necessary in the older civilizations for the maintenance of public peace, the fostering of morality and the preservation of the public health, must also eventually be resorted to by us.

The first lesson which we learned on this question was that of the possibility of the pollution of wells, and a hard lesson it was, and still is, to drive into the head of the farmer or villager, who looks upon his well or spring or pump as a sacred legacy from his ancestors, hallowed by their use for generations, and to doubt the purity of which is to cast a reflection on the character of those who have gone before. The "old oaken bucket," notwithstanding the admirable parody on it by a well known sanitarian, still holds a place in the affections of the

people which wins for it the plaudits of an enthusiastic public wherever the "Old Homestead" is put upon the stage. This idol, however, is rapidly being shattered. Next in order we have been compelled to abandon our faith in the pure mountain stream that comes sparkling and dancing down the hill-sides. Plymouth gave the death blow to this article of belief, but it dies hard. Then the cherished doctrine of the self-purification of streams in the course of a flow of twelve miles was reluctantly abandoned. Finally a careful study of the statistics of our lake cities by Dr. Peter H. Bryce, Secretary of the Provincial Board of Health of Ontario, recently presented before the State Sanitary Convention of Pennsylvania as the Annual Address before the Board, shows conclusively that large bodies of fresh water, however pure by nature, can not be depended upon to neutralize the germs of disease poured into them by large populations. All of these dis-illusions have in turn aroused public attention to the necessity of warding off the corresponding dangers, and have thus resulted in the formulation of legislative enactments of more or less wisdom and efficiency, generally more wise and efficient as their authors have profited by the experience of foreign countries in their construction.

In other words, physical nature, like human nature, is the same all the world over, and it only requires the presence of the necessary amount of human nature sufficiently condensed to develop invariably certain conditions in physical nature which must be heeded. We are a great people and America is a great country, but even the great American eagle must bow in humility before the universal laws of nature. The problems which are now confronting us in consequence of our rapidly increasing population have forced themselves for many years on the attention of thoughtful minds in England and on the continent of Europe.

It would be then the utmost folly not to avail ourselves of the labor and thought which they have expended upon them. As is well known, the result of such study in Great Britain has led to the establishment of a body known as the "Rivers Conservancy Commission," whose duty is to investigate the reality and extent of this alleged evil of pollution of water supplies and to devise means for its remedy. I feel convinced that such a step is rapidly becoming a necessity in this country. To marshal

statistics before this section in order to convince its members that throughout the entire nation, in villages as well as in cities, thousands of avoidable deaths are taking place every year, in consequence of the pollution of public water-supplies, or that the ratio of comparative purity of water-supplies and comparative rate of mortality is almost a constant one, would, I feel, be a work of supererogation. I take that entirely for granted and do not anticipate the expression of a doubt on the subject. The questions naturally suggest themselves, then, "What are the several State governments doing to protect the purity of public water-supplies?" and "To what extent are the State governments capable of preventing the pollution of streams, many of which traverse a large number of States?" This last question is to be considered on its moral as well as physical side. For, while a State government may, in the abstract, possess the power to prevent the contamination of a stream passing from its territory into that of another State, in the concrete it may find itself quite unable to refute the logic of those who are interested financially in maintaining contamination. I think it will be held to be sound law that no State has a right to pollute or poison a source of water-supply passing into another State any more than an individual has to pollute or poison his neighbor's well. If this be admitted, then, if State governments fail to appreciate their responsibilities in this particular, aggrieved States will have no resource but to petition Congress to enact such legislation as will take the matter out of the hands of the State governments and place it as a question of national hygiene, in those of the national government. In order to furnish data for the commencement of the investigation of this problem, I, some few months since, formulated a brief series of questions addressed to the Secretaries of State Boards of Health as follows:

Secretary, State Board of Health of ———

DEAR DOCTOR—Shall I be trespassing too much upon your valuable time if I request brief replies to the following interrogatories?

1. Has your State any laws prohibiting the pollution of streams or other inland waters?
2. Has your Board adopted any regulation upon this subject?

3. If either or both, kindly send me copies of the same if procurable.

4. Do any streams enter or traverse your State which have become seriously polluted in other States?

5. Do any streams which have become seriously polluted in your State enter or traverse other States?

6. In your opinion is it wise or politic to attempt to preserve the purity of streams, or should we not rather allow them to be used as sewers and seek our supplies of drinking water from other sources?

7. If you favor the former alternative, do you consider it expedient in view of the fact that so many of our streams pass from one State into another to petition Congress for the passage of a law forbidding the pollution of streams throughout the entire country, and establishing a "Rivers Conservancy Commission" for the purpose of enforcing such law?

Awaiting a reply to the above inquiries, at your convenience.

Yours very respectfully,

BENJAMIN LEE,

Secretary State Board of Health of Penn.

1532 Pine Street, January 18, 1892.

An analysis of the replies kindly sent by the Secretaries of twenty-three Boards gives the following results:

In reply to question No. 1. "Has your State any laws prohibiting the pollution of streams or other inland waters?"

The following named States and provinces possess general legislative enactments for the preservation of the purity of water supplies and streams or other collections of water: Kentucky, Delaware, Wisconsin, New York, Massachusetts, Minnesota, Maryland, West Virginia, New Jersey, Ontario, Quebec, Illinois, California. In all thirteen.

The following named State possesses special legislative enactments for protecting the purity of the water supplies of certain cities only: Pennsylvania.

In the following named States and provinces the legislatures have made it the duty of the State Board of Health to protect the purity of the water supplies, and conferred upon them powers more or less complete for performing this duty: Delaware, New York, Ontario, Quebec, Minnesota, Massachusetts. In all six.

The States of Minnesota and New York are those of the United States which have adopted what appear to me the most stringent and practical laws upon this subject, and time will not be lost in rehearsing their important features. That of Minnesota, founded on the original law of Massachusetts, which has since been considerably modified, is as follows:

An act to prevent the Pollution of Rivers and Sources of Water Supply.—Chapter 225, Laws of 1885.

To be enacted by the Legislature of the State of Minnesota:

SECTION 1. No sewage, drainage or refuse or polluting matter of such kind as either by itself or in connection with other matter will corrupt or impair the quality of the water of any spring, well, pond, lake, stream or river for domestic use, or render it injurious to health, and no human or animal excrement shall be placed in or discharged into, or placed or deposited upon the ice of any pond, lake, stream or river, used as a source of water supply by any town, village or city; nor shall any such sewage, drainage, refuse or polluting matter or excrement be placed upon the banks of any such pond, lake, stream or river within five miles above the point where such supply is taken, or into any feeders or the banks thereof, of any such pond, lake, stream or river.

SEC. 2. The State Board of Health shall have the general supervision of all springs, wells, ponds, lakes, streams or rivers used by any town, village or city as a source of water supply, with reference to their purity, together with the waters feeding the same, and shall examine the same from time to time and inquire what, if any, pollutions exist, and their causes. In case of the violation of any of the provisions of section one (1) of this act, said Board may appoint a time and place for hearing parties to be affected, and shall give due notice thereof, as hereinafter provided, to such parties, and after such hearing, if in its judgment the public health requires it, may order any person or corporation or municipal corporation to desist from the acts causing such pollutions, or to cleanse or purify the polluting substance in such a manner and to such a degree as shall be directed by said Board, before being cast or allowed to flow into the waters thereby polluted, or placed or deposited upon the ice or banks of any of the bodies of water in the first section of this act mentioned. Upon the application of the proper officers of any town, village or city, or of not less than

—— legal voters of any such town, village or city, to said Board, alleging the pollution of water supply of any such town, village or city by the violation of any of the provisions of this act, said Board shall investigate the alleged pollution, and shall appoint a time and place when and where it will hear and examine the matter, and shall give notice of such hearing and examination to the complainant, and also to the person or corporation or municipal corporation alleged to have caused such pollution, and such notice shall be served not less than ten (10) days prior to the time so appointed, and shall be served in the same manner that now is or hereafter may be by law provided for the service of a summons in a civil action in the district court. Said Board, if in its judgment any of the provisions of this act have been violated, shall issue the order or orders already mentioned in this section.

SEC. 3. The district court, or the judge thereof, may, upon the complaint of said Board, or of the proper authorities of any town, city or village, whose sources of water supply shall be so polluted, issue an injunction to enforce the orders of said Board.

SEC. 4. Such orders of the State Board shall be served upon the persons, corporations or municipal corporations found to have violated any of the provisions of this act, and any party aggrieved thereby shall have the right to appeal to the district court of the county in which is situated the town, village or city, whose source of water supply is found to have been polluted, and such aggrieved party shall have the right to a trial by jury in the same manner as in a civil action in said court. During the pendency of the appeal, the pollution against which the order has been issued, shall not be continued contrary to the order of the State Board, and upon the violation of the order the appeal shall be forthwith dismissed.

SEC. 5. Any person, corporation or municipal corporation desiring to appeal from any such order of the State Board, shall, within thirty (30) days after the service upon him or it, of a copy of such order, file in the office of the clerk of the district court of the proper county, a notice of such appeal, together with a bond in the sum of not less than two thousand (2,000) dollars, with two (2) sureties, to be approved by the judge of said court, conditioned for the prosecution of such appeal to judgment, and for the payment of all the costs and

disbursements that may be adjudged against him or it therein, and shall, within three (3) days after such filing, serve a copy of such notice and bond upon the Secretary of the Board; said Secretary shall within ten (10) days thereafter, deliver such copies so served upon him to the Mayor or other chief executive officer of any such city, village or town, whose source of water supply has been found to have been so polluted.

SEC. 6. Water boards, water commissioners, water companies and the proper officers of any city, village or town, making use as a source of water supply, of any well, spring, pond, lake, stream, river, reservoir or well, within, or partly within, this State, and distributing the waters thereof for public, domestic and general uses, shall, from time to time, and whenever required by said Board, make returns to said Board, upon blanks to be furnished by it, of such matters as may be required by said Board and called for by such blanks, and any such water board, water commissioners, water company, or officers of any city, village or town, who shall for the space of thirty (30) days after being furnished with such blanks, fail or neglect to make any such report so required, shall for each and every such neglect or failure, forfeit and pay the sum of one hundred (100) dollars. for the use of the local Board of Health, or the proper officers acting as such, of the city, town or village where such delinquent has its principal office. Said State Board shall, in the name of the State, prosecute in the district court of the proper county an action for the recovery of the penalty or forfeit therein imposed.

SEC. 7. This act shall take effect and be in force from and after its passage.

Approved March 7, 1885.

That of New York, while efficacious for the prevention of pollutions of a minor character, is hampered by a restriction in regard to the purification of sewage or alterations of systems of sewerage, which at first sight would seem to largely deprive it of value. It reads as follows:

An act to confer upon the State Board of Health power to protect from contamination, by suitable regulations, the water supplies of the State and their sources. Passed June 13, 1885; chapter 543, Laws of 1885.

The People of the State of New York, represented in Senate and Assembly, do enact as follows :

SECTION 1. The State Board of Health is hereby authorized and empowered to make rules and regulations for protecting from contamination any and all public supplies of potable waters and their sources within this State: *Provided, however,* any such rule or regulation shall not be operative in any county until the county judge of that county shall approve the same.

SEC. 2. The said State Board of Health shall also have power, and it shall be its duty: 1. To publish once a week, for at least six consecutive weeks, all such rules and regulations as it shall have made concerning the contamination of any sub-soil waters, spring, streams, lakes, ponds, reservoirs, or other bodies of water contributing to the potable water supply of any municipality within this State, such publication to be made in one or more newspapers published in the county in which the waters affected by such regulations are located. The cost of publishing the regulations of the State Board of Health, as above provided, shall be paid by the corporation or municipality benefited by the protection of the water supply, concerning which the rules are made. 2. To impose penalties for the violation of, or the non-compliance with, their rules and regulations, not exceeding two hundred dollars in any one case.

SEC. 3. The officer or board having by law the management and control of the potable water supply of any municipality, in all cases where the said municipality derives its water supply in whole or in part from any sub-soil water springs, streams, lakes, ponds, reservoirs, or other waters concerning which the State Board of Health shall make any rule or regulation, is hereby authorized and empowered to make such inspection of the sources of said water supply as said officer or Board may deem advisable to secure the said water supply from any defilement, and to ascertain whether or not the rules and regulations made by the State Board of Health are complied with.

SEC. 4. In case such inspection shall disclose the violation by any person or persons of any of the rules or regulations of the said State Board of Health relating to the sources of said water supply, the officer or Board mentioned in section three of this act shall serve or cause to be served a copy of the said rules and regulations, accompanied by a notice specifying

the rule or regulation claimed to have been violated, upon the said person or persons violating such rules or regulations. If the person or persons so served do not immediately comply with the said regulation, the said officer or Board having charge of the water supply of the municipality affected thereby shall notify the State Board of Health of the violation of its rules; the State Board of Health shall thereupon examine into the said violation, and if the party complained of is found to have actually violated any of the said regulations, the Secretary of the State Board of Health shall order the local Board of Health having jurisdiction thereof to convene and enforce obedience to the said regulation.

SEC. 5. In case any local Board of Health having jurisdiction thereof fails to enforce the order of the Secretary of the State Board of Health within ten days after the receipt of a notification so to do, as provided in the last section, the corporation furnishing the water supply, or the municipality deriving its water supply from the waters for the sanitary protection of which such rules have been made, is hereby authorized and empowered to maintain an action in a court of record and which shall be tried in the county in which the cause of action arose against the person or persons violating the said rules for recovery of the penalty therein provided.

SEC. 6. Every person who shall willfully violate or refuse to obey any rule or regulation made and published by the State Board of Health, and approved pursuant to the provisions of this act, shall be guilty of a misdemeanor, and on a conviction thereof shall be subject to a fine or imprisonment, or both, at the discretion of the court, such fine not to exceed three hundred dollars, nor such imprisonment six months. But the recovery of a penalty in a civil action, as provided in section five of this act and criminal prosecution and conviction under the provisions of this section, shall not be had for the same offense.

SEC. 7. When the State Board of Health shall, for the protection of a water supply from contamination, make regulations, the execution of which will require the providing of some public means of removal or purification of sewage, the **municipality or corporation owning the water-works benefited thereby shall, at its own expense, construct and maintain such works or means*

*Italicized by the writer.

for sewage disposal, as shall be approved by the State Board of Health.

SEC. 8. The State Board of Health, any local Board of Health, or any municipality or corporation furnishing water, may cause the affidavit of the printer, publisher, or proprietor of any newspaper publishing the rules and regulations as provided by the second section of this act, to be filed with such rules as published in the Clerk's office of the county in which the municipality or corporation furnishing the water supply in any case may be situated or located, and such affidavit and rules, or duly certified copies thereof, shall be deemed conclusive evidence of due publication and of all the facts therein stated in all courts and in all proceedings or prosecutions under the provisions of this act.

SEC. 9. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 10. This act shall take effect immediately.

An act to amend chapter five hundred and forty-three of the laws of eighteen hundred and eighty-five, entitled "An act to confer upon the State Board of Health power to protect from contamination, by suitable regulations, the water supplies of the State and their sources," relative to the construction of systems of sewerage, and works for the removal and disposal of sewage, and the removal of buildings, and giving a right of action for damages.

Approved by the Governor June 2, 1890. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section seven of chapter five hundred and forty-three of the laws of eighteen hundred and eighty-five, entitled "An act to confer upon the State Board of Health power to protect from contamination, by suitable regulations, the water supplies of the State and their sources," is hereby amended so as to read as follows:

SEC. 7. When the State Board of Health shall, for the protection of a water-supply from contamination, make regulations, the execution of which will require, or will make necessary, the construction and maintaining of any system of sewerage, or a change thereof, in any or for any village or hamlet,

whether the same be incorporated or otherwise, or the execution of which will require the providing of some public means of removal or purification of sewage, the municipality or corporation owning the water works benefited thereby, shall, at its own expense, construct and maintain such system or systems of sewage, or change thereof, and also provide such means of removal and purification of sewage, and also such works or means for sewage disposal as shall be approved by the State Board of Health; and when the execution of any of the said regulations of the said State Board of Health will occasion or require the removal of any building or buildings, the municipality or corporation owning the water-works benefited thereby shall, at its own expense, remove said buildings and pay to the owner thereof all damages occasioned by such removal; and when the execution of any such regulation will injuriously affect any manufacturing or industrial enterprise which is not a public nuisance, the said municipality or corporation shall pay all damages occasioned by the enforcement thereof. And until such construction or change of such system or systems of sewerage, and such works or means for sewage disposal, and the removal of any building, is so made by the said municipality or corporation owning the water-works to be benefited thereby, at its own expense, there shall be no action or proceeding taken against any person or corporation for the violation of any regulation of the State Board of Health under this act; and no person or corporation shall be considered to have violated or refused to obey any such rule or regulation. And the owner or owners of any building, the removal of which is occasioned or required or has been removed by any rule or regulation of the State Board of Health made under the provisions of this act, and all persons whose rights of property are injuriously affected by the enforcement of any such rule or regulation, shall have a right of action against the municipality or corporation owning the water-works benefited by the enforcement of such rule or regulation, for all damages occasioned or sustained by such removal and enforcement of the said rule or regulation or either; and an action therefor may be brought against such municipality or corporation in any court of record in the county in which the premises or property affected is situated, and shall be tried therein.

SEC. 2. This act shall take effect immediately.

In reply to question No. 2. "Has your Board adopted any regulation upon this subject?" In the following named States the State Board of Health has either by regulation, resolution or executive action attempted to protect the purity of inland waters: Massachusetts, Connecticut, West Virginia, New York, Delaware, Kentucky, Maryland, Wisconsin, Minnesota, Ontario, New Jersey, Illinois, California, Rhode Island, Province of Quebec, Pennsylvania. In all, sixteen.

In reply to question No. 6. "Is it wise or politic to attempt to preserve the purity of streams, or should we not rather allow them to be used as sewers and seek our supplies of drinking water from other sources?"

The secretaries of the following named States pronounced unequivocally in favor of making every effort to prevent the pollution of streams and, as far as possible, to keep all impurities from entering them, viz.: Minnesota, Wisconsin, Vermont, Kentucky, Delaware, New York, Province of Ontario, Missouri, North Carolina, Maryland, Province of Quebec. In all, eleven.

The secretaries of the following named Boards doubt the feasibility or possibility of preventing pollution to a very considerable extent, and therefore declare in favor of permitting streams to be used freely and unrestrictedly as sewers, and looking elsewhere for drinking water, viz.: Alabama, Florida, Louisiana, Oklahoma Territory, Rhode Island, South Carolina. In all, six.

The secretaries of the following named State Boards considered that the question could not be answered categorically, but that each case of pollution or threatened pollution should be decided upon its merits as it arises: Massachusetts, California, Illinois, Connecticut, Michigan, West Virginia, New Jersey. In all, seven.

In reply to question No. 7. "If you favor the former alternative, do you consider it expedient, in view of the fact that so many of our streams pass from one State into another, to petition Congress for the passage of a law forbidding the pollution of streams throughout the entire country, and establishing a Rivers Conservancy Commission for the purpose of enforcing such a law?"

The secretaries of the following State Boards express themselves as in favor of national legislation forbidding the pollution of streams and establishing a Rivers Conservancy Com-

mission for the purpose of enforcing such legislation : Louisiana, Delaware, Province of Ontario, Missouri, Maryland, South Carolina, Illinois, Connecticut, Michigan, West Virginia, Wisconsin, Vermont, Kentucky, Province of Quebec. In all fourteen.

Dr. N. D. Baker, of West Virginia, says :

"I would join in earnestly urging the above action upon Congress."

Dr. F. W. Reilly, of Illinois, says :

"The proposition to secure a Rivers Conservancy Commission, with power, authority and means to determine individual cases on the basis of individual conditions has my hearty endorsement."

Dr. C. W. Chancellor, of Maryland, says :

"I am decidedly in favor of a 'Rivers Conservancy Commission' with strong laws to prevent pollution of any water-way. The general government will be forced at an early period to enact a law to protect the water supply of Washington City, which is already greatly polluted by the States of West Virginia, Virginia and Maryland. Congress alone can remedy the evil."

Dr. R. C. Atkinson, of Missouri, says :

"I heartily approve of such a measure."

Dr. P. H. Bryce, of Toronto, says :

"I think the suggestion that the question of the pollution of streams be taken up as a Congressional matter should be approved of and urged by all interested in State or international sanitation."

Dr. E. B. Frazer, of Delaware, says :

"I heartily approve of the above. Protect the streams, keep them as the Almighty made them."

The secretaries of the following State Boards are decidedly opposed to invoking the authority of Congress, believing that the separate States are fully capable of dealing with this problem : Rhode Island, Florida, Massachusetts, New Jersey, Minnesota, California.

It will thus be seen that the consensus of opinion of practical sanitarians is strongly in favor of legislative interference for the protection of the purity of water-supplies and streams ; that in several States such opinion has crystallized into a public sentiment of such force as to compel the unwilling acquiescence of legislators and lead to the passage of laws for the

purpose; that as an ideal question all regard it favorably; but that, as a practical question, the varying conditions of the several States modify the opinions of those residing therein. In some instances the drainage problems of the country are such as to make it appear almost an impossibility to prevent the pollution of streams; in others the manufacturing interests are paramount to all other considerations; and in a third class, the country is so sparsely peopled and there is such an entire absence of manufacturing industries, that the question is not with them an urgent one. Wherever it has forced itself upon the attention of sanitarians, and the difficulties are not so great as to make them appear at first sight insurmountable, but one opinion has been entertained and expressed. This being the case, is it not desirable that this section should formulate a request to Congress to appoint a committee to consider the expediency of the establishment of a "National Rivers Conservancy Commission," and transmit the same to the Association with a recommendation for its adoption?

In coming to a decision on this really momentous question, it is in the highest degree desirable that we should allow hygienic considerations and the interests of human life alone to have weight! Shall we permit local jealousies or inherited prejudices or questions of political organization to influence us? Are not thinking men who reside in large cities beginning to wake up to the fact that so far as municipal government is concerned we have been grasping at the shadow of liberty only to lose the substance? Shall we allow the boggy of centralization of power to deter us from advocating a measure which may prove the salvation of thousands of lives?

POLLUTION OF STREAMS.

BY PETER H. BRYCE, M. A., M. D., SECRETARY PROVINCIAL BOARD OF HEALTH OF ONTARIO.

Mr. President and Gentlemen of the Conference:

In discussing the subject assigned to me, I do not propose to enter upon an historic account of either the views that have been held, or of the attempts which have been made to deal

with the problem. I shall, therefore, endeavor to deal with its practical aspects with which we, as executive officers of health, are naturally expected to deal.

Much has been written on the subject with a view to laying down general principles, intended to apply to the question of river pollution in all localities and under all conditions. I believe I am expressing the views of most here when I say that owing to this probably more than any other cause, we find ourselves to-day met with statements and counter-statements as to the evil effects of such pollution, which have proved most detrimental to the advancement of public knowledge and municipal improvement in methods of sewage disposal.

There exists, however, other and most serious obstacles which have obstructed the progress of the question. Some of these are:

1. Individual selfishness and municipal parsimony in dealing with the question of public water supplies and disposal of sewage.

2. The various standpoints from which the subject is approached such as (a) that of the engineer; (b) that of the health officer; (c) that of the chemist; (d) and that of the biologist.

The engineer seeks for the best point or points for an outfall toward which his sewer mains shall converge, and afford him proper levels in his laterals.

The health officer, very properly, is concerned in seeing that this outfall shall be located, as to at least prevent a local nuisance or injurious effects to the residents of his own municipality.

The chemist thinks that if a river in organic constituents is no worse than any natural waters that it is fairly safe.

The biologist is inclined to settle the purity of a stream off-hand by the number of living bacterial forms he finds present.

While difficulties such as those just pointed out may be said to attach to the consideration of any question, they yet have assumed special prominence in the subject of our discussion, since to each belong some one or more important elements in the formation of any comprehensive or correct conclusion. For instance, if in a swift-flowing river sewage is deposited in the middle of the channel, the coarse materials having been retained in a penstock, and should water be taken from the river some miles down the stream, it may in some instances

have been found possible to not only create no local nuisance, but to show no notable evidence of sewage contamination to the water-supply below. Again, the chemist, if he has in the above instance found the water below such an outfall improve with distance, asserts with much confidence that the sewage, by sedimentation, oxidation, etc., has disappeared, and that the river water maintains its potable character.

Similarly, in the same instance, if trade refuse added to the sewage has served to prevent some of the bacterial forms peculiar to a river water from being more abundant below than above such a sewage outfall, the biologist might similarly be slow to condemn such a river water for drinking purposes.

But if we view the question from, as far as possible, the totality of conditions which enter into it, we are not long in seeing that in the very nature of things no conclusion based on the several tests, as applied in the above case, is admissible, since in all surface waters, but especially in streams, there is an almost daily variation in their local conditions, dependent upon drought or rains and floods on their branches and higher reaches.

There are local rains washing into the streams surface refuse recently accumulated and of a dangerous character, or the dissemination from old sources of pollution, as sewers, recent materials having in them specific poisons, which may develop in any river stream, and may suddenly give to previously inoffensive waters most fatal qualities. If engineers, chemists and bacteriologists were engaged daily with their various indicators in measuring these changes of quality, and were they supplied with efficient means for correcting defects, then we might fairly conclude that with such regulators a river supply would be safe.

Such an ideal state has, however, not been reached; and as executive officers we are bound to enquire more specifically into the matter, and to determine what attitude with our present attainments, we, as sanitarians, can best assume, and in what direction we must direct our energies.

I. EVIDENCES OF POLLUTION BASED UPON STATISTICS OF DISEASE.

So general seems to be the opinion that cholera in its native haunts is conveyed by river water, and so universal the evidence of malaria being along in river waters from lagoons and shallow banks, where organic vegetable matter accumulates and decomposes, that I shall not deal further with them. The case which interests most of us, and which may be said to be the crucial test of water pollution in temperate climates is that of the dissemination of typhoid fever.

I do not propose to take up time in discussing the statistics of typhoid in all those cities north of the Ohio, situated on rivers below sewage outfalls and strike an average and settle the question for or against sewage pollution of river water from the evidence of an increase of typhoid deaths (though I am certain a strong argument could thus be built up and probably will be by others on this discussion; but I shall take what seems to me a more difficult case as a test, viz., evidence from statistics that pollution of immense bodies of cold lake water, and of several river waters in cold weather, is not only possible, but that it does take place.

The accompanying diagram illustrates the first point, viz., that bays of great lake water, in itself the type of pure water both from the chemical, biological and experimental standpoint, are not only capable of becoming polluted, but in the instances given is also actually polluted to the point of being comparatively measured by death-rates great in comparison with those cities supplied with the same waters, but from points where at present contamination can not take place.

The following are illustrative of the second point:

(a.) The provincial Asylum at Kingston, Ontario, is supplied with water from a pipe laid into a bay of Lake Ontario at a point where a creek brings down vegetable matter.

The Superintendent who for years has had the same experience, except that in recent years the use of a Hyatt filter has lessened the outbreak somewhat, yearly expects that toward the end of January, a fever will break out amongst the inmates, which for lack of a better he calls vegetable typhoid.

(b.) During the autumn of 1887 the Ottawa River, a river only second to the St. Lawrence in size, and having its headwaters on the water-shed to the south of Hudson Bay, was

the occasion of disseminating a fever, commonly considered typhoid, in November, which in six weeks had caused 1,500 cases, or had affected one-fifth of the total population between the susceptible ages of fifteen and thirty years.

(c.) An outbreak, known as the Plymouth outbreak occurred in Pennsylvania in March, 1888, the particulars of which are known to all.

(d.) A curious outbreak, whose details have been given by Dr. Vaughan, of Ann Arbor, who made biological experiments with the water, took place at Sault Ste Marie on the United States side during the summer of 1890, although the waters of this, as the other great lakes, seldom rises except along the shore to a temperature above 45° F. even in late summer.

As the presumed cause of this outbreak, a number of vessels had been temporarily, for a week or so, anchored near the town intake pipe in Lake Superior, owing to a break in the canal.

I do not deem it necessary to enter into local details but need only say that in every case, as Chicago, Cleveland, Toronto, etc., the intake pipe is in water fifty feet deep at least; hence, in very cold water, and while in at least the Toronto instance, the pollution may have been taken in through leaks in the pipe in the bottom of the bay, we have positive evidence from comparative statistics, that no matter how great dilution may be, if sewage can by winds or currents reach the intake pipe, it will show its presence in the death rate if typhoid germs exist in such sewage.

The following, I believe, will be found to be a law, viz.: "That taking a series of years, the pollution of even relatively immense bodies of lake water, which, having no regular flow, are liable to carry sewage to a water intake, will, at certain seasons, and with winds moving sewage towards the point of supply, cause outbreaks of typhoid of a more or less epidemic character." I further believe that we can establish from the foregoing diagrams another law, viz.: "That in cities obtaining practically all their drinking water from a public supply whose source is beyond the possibility of contamination, typhoid fever will practically disappear from the list of causes of mortality."

II. CAUSES AND CONDITIONS OF POLLUTION OF STREAMS.

What I have just stated as being what I believe will prove two laws regarding pollution of streams applies of course to the great source, which, as sanitarians, we are so directly interested in, viz.: sewage.

But there are several other causes or sources which play an important part in this pollution, and which vary notably both as regards different streams and at different points in the course of the same streams. Referring to the first, it is manifest that a mountain stream issuing from the foot of some glacier, or as a spring flowing as under-ground water from clefts in the rocks, or appearing on the hill-side from some water bearing sand on the top of impermeable clay, and flowing thence in channels cut through rocky beds or layers of clay, will not bear down either in suspension or solution any notable amount of vegetable organic matter. As, however, these or other streams speed on their courses to the plain, they not only keep constantly receiving soakage from swamps and forest vegetable detritus, but they are constantly washing in some districts alluvium from their banks, and where they pass through cultivated regions tend to receive more and more the surface washing from manured fields, barnyards, etc., and direct pollution from cattle and other animals which have access to them. Owing to the constantly changing character of the bed along many streams it is, however, common experience that the waters of such show, at different points, varying amounts of vegetable pollution.

We are aware, for instance, how the moorland water of the highlands of Scotland, the lake district of England, the Adirondack and Laurentian regions of the United States and Canada, have always presented in analysis an amount of vegetable pollution enormously greater than is often found in other rivers which are looked upon with suspicion as sources of public water supplies.

Take for comparison an analysis of the water of Great Lakes as in the St. Lawrence, and of the Ottawa, whose different waters flow along side of each other, the blue of the one distinguishing it for miles from the reddish hue of the other.

Analyses of water in Lake St. Louis. This lake receives both rivers, but the waters do not mix for miles.

LAKE ST. LOUIS, OTTAWA RIVER WATER.

TOTAL SOLIDS.	Loss on Ignition.	Albuminoid Ammonia.	Free Ammonia.	Chlorine.	Oxygen in 4 hrs.	Oxygen in 15 min.
72	32	0.238	0.030	1.00	5.688	3.128

LAKE ST. LOUIS, ST. LAWRENCE RIVER WATER.

TOTAL SOLIDS	Loss on Ignition.	Albuminoid Ammonia.	Free Ammonia.	Chlorine.	Oxygen in 4 hrs.	Oxygen in 15 min.
128	48	0.130	0.014	3.50	1.280	0.628

Manifestly, therefore, other very different elements enter into the problem than that of excess of vegetable organic matter.

Speaking generally from the sanitary standpoint those streams possessing frequently excessive amounts of vegetable organic matter of a humic character have come to be recognized as in themselves wholesome, and to be placed in northern latitudes in a very different category from many other streams, showing much less impurity of this kind.

As illustrations, I give analyses of three different waters.

The first is from an inland river, taken from under the ice in February, the river flowing from a lake of considerable extent with swamp along its borders.

ANALYSES OF SCUGOG WATER ABOVE LINDSAY.

	In parts per million.
Free ammonia.....	0.72
Albuminoid ammonia	0.38
Chlorine.....	6.00

The second is from an artesian boring through blue clay to a water-bearing sand above Hamilton Shale. It is used as a public water supply.

	In pts. per million.
Free ammonia.....	0.40
Albuminoid ammonia	0.08
Chlorine.....	202.0

The third is Chicago public water supply after a week of southwesterly winds, the river being two feet higher than the lake.

	In pts. per million.
Free ammonia.....	0.011
Albuminoid ammonia.....	0.088
Chlorine.....	1.888

The analyst of the latter water states that the water supply is taken from a point two miles from the shore line. The albuminoid ammonia in water taken from the crib seems no greater than in water taken several miles further out.

Such waters, however, frequently present different characteristics, quite apart from the question of sewage contamination dependent upon the amount and nature of the inorganic sediment which they contain.

As this varies from arenaceous to cretaceous or to argillaceous, we find very different degrees of precipitation of this vegetable organic matter clay precipitating with comparatively great slowness.

The well known differences are illustrated in the enormous settling basins which cities using such waters as the Missouri, required if the water is to be freed from its organic character; or in the artificial aid to sedimentation now made use of by water companies, using artificial filters. But these river waters having high amounts of vegetable matters possess therein elements which, while harmless in themselves, may become the condition whereby most extended outbreaks of fever may result.

Deposited in lagoons they may become, with the retreating water, subject to decomposition in the summer, and, being borne down by the next freshet, become the occasion of malarias and dysenteries of the most serious character. But what is yet more common in our northern cities is that some point or other in their course they receive specific typhoid contamination from sewage. I have in mind such a case as that of the Ottawa in 1887. A water race had been blasted from the rock for about half a mile along the river bank to obtain power to drive the engines. Along the bottom of this race was laid the wooden conduit into the river above. During the investigation into the outbreak the committee of the Provincial Board,

learning of the suddenness and general dissemination of the fever throughout the city, at once concluded the outbreak was due to typhoid.

The engineers and many local medical men laughed at the idea of the majestic Ottawa carrying typhoid. When, however, the conduit was examined the next year the following condition, as stated in the engineer's report, was found:

"I had it examined by a diver, who reported a large number of small holes in the pipe, and he cut out two small pieces of the wooden staves, which showed that they had been eaten or worn away from some cause which I could not then determine. In order to be doubly sure, I employed another diver, and he reported the pipe in a very bad state throughout its entire length. He took out more pieces of staves, which were even in a worse state than the first. I then had the inlet to clear water pipe tightly closed, and found that the pumps ran far over an hour without any perceptible change in the gauge level, thereby clearly showing that the water pumped into the city was drawn direct from the aqueduct, and not, as intended, from the inlet of clear water pipe."

The Lowell and Lawrence outbreak in Massachusetts, in 1890, is a similar instance, although the pollution, especially of the Lawrence water, had for years given these towns an unenviable notoriety in the matter of typhoid prevalence. The following extract from the annual report of the Massachusetts State Board of Health for 1890 well illustrates this point of the results of sewage pollution.

"These are the only two cities in the State which draw their water for drinking purposes from the river, into which, within twenty miles above, sewage is publicly discharged.

"The amount of sewage that has directly entered the river and its branches during the chemical examinations of the past three years is estimated to be about one gallon in six hundred of the river water passing Lawrence, and there has been no more impurity in the water that could be detected by chemical analysis, than in about one-half of the drinking water supplies of the State obtained from ponds and streams; but the facts which have been presented showing that these two cities have so much more higher death-rate from typhoid fever than any other cities of the State, together with what is known of the relation of typhoid fever to sewage-polluted drinking water,

are the strongest grounds for concluding that even with the smallest amount of organic impurity in the water, as shown by chemical analysis, the disease germs of this disease are able to pass, and do pass, from one city to the other in the waters of this river."

The details of an outbreak in the cities along the valley of the Tees, in Yorkshire, England, which occurred in August and September, in 1890, are so admirably set forth in the report for 1891 of the local Government Board of Great Britain, that I can not forbear referring to them.

11. (a). The outbreak began in August, 1890, a great increase in the typhoid cases for the fortnight ending September 20, being noticed, which increase continued till October 4. In four weeks 570 cases occurred in 550 houses. In all the area, made up of some thirteen registration districts, there was a total population of 520,000, nearly all of whom were supplied with water, passed the subsidence tanks, thence through sand filter-beds, from the Tees. It was supplied by two water companies, their intakes being but a few score yards apart at a point two miles above Darlington at Broken Scaur. The amount of water daily pumped was about 11,000,000 gallons.

During the four weeks the exceptional prevalence was limited to the areas so supplied, 41,000 houses being supplied by the companies; 6,000 were supplied from other sources. The rate of excess was calculated by the house—there being twelve cases per 1,000 in those supplied by the city, and less than one per 1,000 in houses supplied from other sources.

What was remarkable was that several hamlets along the river above, getting water out of the river, but not from the water company, escaped.

Above the source of supply the drainage area of the river covers three hundred square miles and the water flowing past the pumping station in times of drought amounts to 45,000,000 gallons.

Over this drainage area are scattered 15,000 persons in numerous villages and farm houses. Some fifteen to twenty villages up to Barnard Castle are situated along the river. The nearest is half a mile above the intake pipe, 33 houses whose drainage runs into an old cesspool with an overwash during rains into the river. The next town is two and a half

miles up the river with 60 houses, and the next is six miles up with 170 houses.

The sewage from the last has its watery portion flowing over into the river, the rest drying alongside of a ditch which washed out with floods.

The next town is seven miles up, and the next is ten miles with 300 houses polluting a branch of the Tees. At fifteen miles above is a town of 1,000 houses.

The harvest rain fall in the valley during the period occurred in the fortnight ending August 23. The river was in flood on the 18th, also on the 23d.

The rainfall of the 23d is exactly parallel with the incubation period of typhoid, which preceded this general diffusion.

The town authorities have for years recognized the liability of the river to severe pollution, which occurs during flood time. In 1887 analyses were made biologically and chemically, the report of which states "That on a sudden rise of the river's flow, and for 48 hours after its onset, there is great increase of organic matter at the pumping-station and abundant evidence of unaltered sewage." "The filtering processes greatly reduce the amount of organic matter, but during high water the town water shows presence of organic pollution, which is in part composed of fresh unaltered."

None of the towns above suffered from any epidemic of typhoid during this period, although several cases had appeared.

Dr. Barry concludes his report on this outbreak with the following conclusion: "That if the sewage and excremental and other refuse were kept out of the river, the danger of specific pollution would be greatly reduced, but even under these circumstances it is still doubtful whether a water pumped from a river at a point upwards of forty miles from its source, is anywhere in this country a desirable supply for drinking purposes." From these and hundreds of other outbreaks which have been more or less closely studied, it must be apparent that the soundness of what I have laid down as a law of pollution can scarcely be questioned.

At this point we are, however, met with the sceptical enquiry, how, if what is here stated be true, does it happen that out towns are not decimated by constantly recurring outbreaks of typhoid? I shall therefore endeavor to set forth what appears to me to be chief reason.

III. WHY POLLUTED STREAMS FAIL TO PRODUCE AT ALL TIMES OUTBREAKS OF TYPHOID.

Notwithstanding all that theory would lead us to infer with regard to the causes which lead to outbreaks of typhoid, it may here be said with perfect truth that there have been and are many local conditions, which viewed generally seem so bad as to inevitably cause outbreaks of typhoid, and yet which have failed so to do. Believing as I do, and as I believe most here do, in the production of the disease only to be some one or more specific species of microbe, it becomes incumbent on us to endeavor to supply some rational explanation of these cases of local, temporary, or continued immunity from outbreaks of typhoid. I shall endeavor to give what appear to me to be some of the reasons, therefor in their natural order.

1. The temporary absence in the polluting sewage of some towns of the specific microbes from pre-existent cases. This may fairly be assumed from the facts, frequently published, that when the excreta from cases have been known to obtain entrance into wells, into small streams, etc., they have seemed to be the occasion of outbreaks where with the same polluting conditions few or no cases had previously appeared.

13. (a.) 2. The much more frequent case, when, although such microbes do reach streams supplying public water, the natural agencies inimical to their multiplication have preponderated. What they are is but partially known. By bacteriologists we are assured that water-bacteria are hostile to the development of typhoid germs; from others we learn from their experiments, that while the diphtheria bacillus and the cholera bacillus are not soon affected by sunlight, yet the typhoid bacillus soon disappears if exposed in liquids to sunlight.

3. Another, and I believe, a most potent cause for their non-multiplication is temperature; and in this way that with a warm temperature water-bacteria are present in streams in incredible numbers, and do then very probably prevent the development of typhoid bacteria, and by presence of sunlight.

That there are temperature conditions, however, most favorable to the development of typhoid bacilli seems to me to be proven beyond all doubt by the history of what we often term typhoid wells.

Probably every one of us is acquainted with one or more such wells which, as the latter summer months come round, cause local outbreaks of typhoid. In the north these are almost invariably shallow wells fifteen or twenty-five feet deep or less.

In such the normal water-temperature of say 50° F. slowly increases, the depth of water and therewith the dilution of the filth in the well becomes less; and the annual outbreak of typhoid occurs.

Here are increased pollution, increase of temperature and absence of light, the necessary elements for the development of the germs of the disease which have lain dormant in the well. In streams, such conditions do not exist together with anything like the same frequency; and hence it is that in warm seasons it seems principally when floods, bearing down an increased pollution, or when drought by evaporation, producing much the same conditions, occurs that river typhoid develops most freely.

4. To these conditions Pettenkofer, and others with him, adds a most important agency in the abounding vegetable life of streams which, according to this author, continue their purifying effects on the waters of German rivers even in winter. For two reasons this same infusorial life in the cold rivers and lakes (except small lakes and ponds) of the North does not in winter seem to carry on its beneficent work, as seen from the facts: first, that in our frozen rivers the vegetable organic materials present are at times in excess, sewage will flow unaltered for many miles under the ice, and second, because as seen in most notable instances, as in Ottawa outbreak, as also a most serious outbreak at Sarnia on the St. Clair River, at Plymouth, Pennsylvania, river epidemics of typhoid have occurred with the river water at winter temperatures.

5. Another and most potent element in the prevention of outbreaks is constantly more or less in operation, viz.: sedimentation. Polluted swift-flowing streams may really be more dangerous than sluggish ones. Buffalo sewage is readily detected in the Niagara River at the falls, and the river water at Fort Niagara at the mouth of the river shows some evidences of its presence. In so cold a stream decomposition by natural processes must of necessity, as in winter, be delayed and sedimentation can not well take place, enormous dilution being the special element of safety in this case.

In sluggish streams with detritus from the banks of creeks and rivers sedimentation in such water is enormous; but when in winter this does not greatly take place the sewage may, with whatever germs it contains, be carried along to a public water-supply unaltered, and, being drunk with the water, produce, as in instances cited, epidemic effects. Of other accidental elements to prevent outbreaks is that of currents. Currents in streams as in lakes, although perfectly understood by fishermen and every amateur yachtsman and harbor-master, are to the engineer and scientist enigmas as difficult to understand as is the historic flea to catch; as popularly stated, "You put your hand on it and it isn't there."

This has been elaborately illustrated by the results of a series of float, temperature and bacteriological experiments carried on during the past summer in Lake Ontario along the Toronto water-front.

We had been told by some, the currents set westward; by some, eastward, and so on; but the results showed in every case that surface wind currents ultimately determined the direction of the deep water floats, that surface warm water was with certain strong winds drawn out into deep water by an undertow, and that these currents, if bearing sewage, would undoubtedly temporarily pollute the city water supply.

These same surface wind currents will, similarly to some extent, affect every river current, and while it may be true that a water pipe laid in deep water, in mid-stream, will escape much surface sewage pollution, it is no guarantee that such will always and invariably continue to be the case. (Indeed, in ponds and sluggish streams, it has been shown by the Massachusetts Board experiments that the deepest waters are often most polluted).

Hence, while the pollution of a stream is such as to cause most positively deleterious effects, it will depend upon the relative location in the stream of the sewage current, and the current at the point whence the water is taken, whether the pollution will be much or little, constant or intermittent.

7. The last of the reasons I give here is that on which so much has been spoken and written, viz.: Artificial removal of pollution.

Artificial purification of some kind or other has been too long practiced for us as sanitarians to ignore its utility. In an

article at the recent Water Works Association Meeting, in Brooklyn, on the Brooklyn water supply, the source of that wonderful underground supply and its freedom from contamination was set forth. There is exhibited the great natural system of intermittent downward filtration. It is Nature's, and like everything that Nature does, if allowed her own time, it is perfect.

There is illustrated what is arrived at by water companies. They attempt it in various ways. The great Lindon water companies have beds of sand, acres in extent, through which water is not allowed to pass by law faster than at the rate of per hour.*

This method is manifestly crude, as some days the clear river water may be well purified; at others this may be, with increased pollution, imperfect. How imperfect such a filter may be is seen in the Tees epidemic referred to, and that related at the International Congress of Hygiene, by Dr. Kummel of Altona, below Hamburg.

This system has been reduced to something more scientific at Berlin, where the action of the filters is measured by the plate cultures being daily poured by the officers in charge; but what kind of a check-valve is put on I do not know; and of how great practical utility it can be I can not readily conceive, since if floods brought down excessive impurities, and the degree of bacterial pollution would require at least twenty-four hours to be measured, the river might be clearing by the time special filter beds were brought into requisition. However, it is a positive advance in knowledge of the life-history

NOTE.—“The water supplied from the Thames to London is all submitted to the purification processes of subsidence and filtration, the filter beds of the different companies vary in detail, but are all constructed upon the same plan; for example, the four filter beds of the West Middlesex Company (6 acres in total area) at Barnes have a total thickness of filtering medium of 5 feet 6 inches, consisting of 2 feet 3 inches of Thames sand, 1 foot of Barnes sand, and 2 feet 3 inches of gravel of various degrees of coarseness; beneath the filter beds there are collecting drains of 6 inches diameter; they are pierced and laid 20 feet apart.

“Efficient filtration largely depends on the rate or flow of the water through the filtering medium. It is laid down as an accepted standard that the rate of filtration for the metropolitan waters should not exceed 540 gallons per square yard of filter bed each 24 hours, or 2 gallons per square foot per hour. None of the London companies at the present time infringe this rule, and the filtration rate in practice is slower than the above.”

of the Spree at that point. That the results are far from complete is seen in the plea raised by Pettenkofer and others for a Rivers Commission to be appointed by the German Government to study in detail each river supply in relation to the towns supplied.

What sewage farming has already taught us in the old world and what Massachusetts experiments have recently demonstrated indicate that along quite another line than that of mechanical filtration it is possible to approach Nature's method of intermittent filtration, which, in my opinion, is most economically carried out by letting Nature measure the extent of ground required and then by our taking the filtered waters from waters from their native bed, as under-ground waters, where contamination is impossible.

Basins for sedimentation have in the past and must still in the future play an important part, but they are of necessity always a crude and imperfect method except at great expense.

During the past year I have had an opportunity of experimenting with an artificial filter under pressure, and have to state it is my belief that there are very great possibilities in store for this method.

At St. Thomas, Ontario, the water supply is obtained from Kettle Creek filters by means of a Hyatt filter. The Hyatt system consists of the addition of a small quantity of alum for each gallon of water before filtration, thus clarifying it considerably by the formation of precipitate. It is claimed that this precipitate in falling entangles and brings down with it the bacteria so that they are more easily removed by filtration. The filtration takes place through sand contained in large horizontal cylinders, provision being made for the reversal of the stream of water once in twenty-four hours so as to thoroughly cleanse the filters.

In St. Thomas there are two of these filters, each with a filtering capacity of 500,000 gallons, and they are at present putting in an additional one.

The following are some of the results:

July	Before filtration	45,000 per c. c.
	After filtration	90 " "
Oct. 23....	Before filtration, average	240 " "
	After filtration, average	44 " "
	Pumping at rate of 1,324,800 gallons per 24 hours.	

Oct. 24....Before filtration (10:30 A. M.), average.....	1,380
After filtration (10:30), filter 1 cleaned at midnight.....	59
After filtration (10:30 A. M.), filter 2 cleaned at 10 A. M.....	270
After filtration (11 A. M.), both filters together	65
Pumping at rate of 810,720 gallons in 24 hours.	
Oct. 26....Before filtration	1,545
After filtration	70
Pumping at the rate of 794,880 gallons in 24 hours.	

These results show a high degree of efficiency in the filters as in the case of the examination of October 23, the pumps were sending water through the filters at a rate about one-quarter as fast again as they should.

The reason why they do their work is perfectly easy to understand; but the work to be done increasing almost daily it is likely to be found in practice, as indeed with all artificial methods, that the filters will be forced to try and do more than they can perfectly and with success accomplish.

Having then at some length set forth:

1. Why the question of pollution of streams has so long been one of controversy.
2. Some of the evidences of pollution of streams, based upon statistics of disease.
3. Some of the causes and conditions of pollution of streams.
4. Why some polluted streams fail to produce at all times outbreaks of typhoid, we may very briefly endeavor to sum up the question which we started out with, viz.:

What attitude with our present attainments must we as officers of public health assume in regard to the pollution of streams by municipal sewage, and in what direction must we especially direct our energies?

Doubtless for the present our action is limited on its executive side by the statutory enactments peculiar to each State or Province; but inasmuch as legislation is dependent ultimately upon the views we hold on these subjects, it is always possible

and necessary that we exercise on municipal authorities an influence which will materially aid in obtaining general enactments, which will govern the disposal of sewage generally.

It is quite apparent that the density of population, as it varies in different States, and in the same State with increasing years of settlement, is the element which more even than preconceived scientific opinion forces upon the public, and thereafter the Legislature the discussion of what constitutes pollution, and of what measures are to be adopted for preventing or regulating existing pollution. It would be most fortunate, however, if new States and Provinces just entering upon the work of city-making should copy such legislation as has been forced upon older States by increasing population; since the many questions of vested municipal rights, and the interests of riparian owners could at such a time be adjusted in a way, which, at a future date, may be found impossible without costly litigation.

The considerations already presented, make apparent the fact that we need not expect to set down conclusions off-hand as regards details, which would be either universally applicable, or accepted on all hands as correct. To illustrate this, I quote one or two expressions of opinion by prominent sanitarians. Dr. Barry has stated that in his opinion "It is doubtful whether in England any river, forty miles from its source, can be considered a safe source of public water supply," and yet the Government Official Water Examiner states that more than fifty per cent. of the water supply of great London is taken from the Thames, and that as long as 1885 the sewage of over 70,000 people was delivered direct into the river at points above the intake.

As already stated, Pettenkofer and others with him have concluded that Minich may be allowed with safety to drain into the Isar "without any hygienic disadvantages to the inhabitants."

This opinion seems to have been based upon the following experiments: Water was taken at Thalkirchen, a point on the river above Munich, and also at Treysing below the city. The water showed precisely the same qualities. He adds, however: "Of course the natural chemical quality of any given water, as also the character of the river bed, its vegetation and strength of current would play an important part in

the work of purification. Simple chemical, physical and biological influences must all be considered."

Dr. Kummel, of Altona, holds, however, views strongly opposed to this. At the London Congress he related the details of an epidemic of typhoid at Altona, which city takes its public supply from the Elbe after a careful filtration. The city is situated below Hamburg. It appears that the latter city takes its water from the river without filtering, and with comparative safety.

Without multiplying opinions as to the natural purification of streams, which chemical analysis shows goes on in many streams owing to processes already referred to, I quote, as bearing upon the point, the words of Fred. P. Stearns, Engineer, to the Massachusetts State Board of Health, in a section treating on the various amounts of different constituents of domestic sewage added to a stream per 1,000 of population:

"With larger volumes (of water) the pollution (from 2.5 to 7.0 cubic feet per second per 1,000 persons) is so small as to be clearly admissible from the standpoint of the offensiveness of the water."

Then he adds: "In a stream used for domestic water supply it can not be said, with our present knowledge, that any degree of dilution will make the water entirely safe for use."

Whatever, therefore, may be held on the various points, coming up for consideration in connection with the disposal of the sewage of any individual municipality, the following three general propositions will, I have no doubt, meet with general acceptance:

1. That, as is stated in "An act to protect the purity of Inland Waters" passed by the Legislature of Massachusetts of 1888, "The State Board of Health shall have the general oversight and care of all inland waters." It shall recommend measures for the pollution of such waters, and for the removal of substances and causes of every kind which may be liable to cause pollution thereof," or as stated in the Public Health Act of Ontario. Whenever the establishment of a public water supply or system of sewerage shall be contemplated by the Council of any city, town or village, it shall be the duty of the said Council to place itself in communication with the Provincial Board of Health, and to submit to the said Board, before their adoption, all plans in connection with the said system.

It shall be the duty of the Provincial Board of Health to report whether, in its opinion, the said system is calculated to meet the sanitary requirements of the inhabitants of the said municipality; whether any of its provisions are likely to prove prejudicial to the health of any of the said inhabitants, together with any suggestions which it may deem advisable; and to cause copies of the said report to be transmitted to the minister of the department to which the said Provincial Board of Health is attached, and to the clerk of the Municipal Council, and the Secretary of the local Board of Health of the district interested. No sewer or appliance for the ventilation of the same shall be constructed in violation of any of the principles laid down by the Provincial Board of Health, subject to appeal to the Lieutenant-Governor in Council."

2. That those municipalities situated within the same drainage area where streams, polluted with sewage from one municipality become, or are likely to become, sources of public water supply for other municipalities, be by the law united by an Order-in-Council to the Governor upon the report of a State or Provincial Board into a Rivers Conservancy Board, said Board to act in conjunction with the State or Provincial Board in the consideration of town water supplies and sewage disposal within the area.

3. That in cases where river, lakes, etc., form interstate, interprovincial or international boundaries, or where the course of such passes from one State or Province into another, that interstate or interprovincial action be encouraged; and that in those cases where streams come within the control of a Federal Government that such government should urge interested States and Provinces to similarly appointed Conservancy Boards.

Amongst other conclusions, which I believe the facts warrant us in drawing, but upon which there may be differences of opinion are the following:

1. That no water into which sewage flows can at all times, and under all circumstances, be considered safe for domestic supplies.

2. That there are streams and lakes, such as the Great Lakes, of such enormous volume that it is as yet possible to pour sewage into them and yet use their waters for the public supply; but that this can only be done in those cases where such

distance intervenes as shall allow time for the natural purification of water to have completed itself, and that this can only be known after careful and extended experiments, chemical, biological and bacteriological, in addition to currents and temperatures, carried out in different seasons, and under the varying conditions of flood and drought, etc.

3. That where ordinary streams in well settled districts are required to be used for public purposes, owing to the lack of either source of supply, that every effort be made by boards of health to have the gathering grounds and sources of supply kept free from all forms of animal pollution; and hence would urge the modern methods of sewage disposal, notably those of intermittent filtration or precipitation, with subsequent filtration, be forced upon the attention of cities and towns contemplating having sewerage works.

4. That few river waters are fitted for use without sedimentation and filtration, either by natural sand filters or some mechanical filter, as those through sand operated under pressure.

The questions were fully discussed by Drs. Cochran, Thompson, C. A. Lindsley, Vaughn, Walcott and Lee. On motion of Dr. McCormack, the whole subject was referred to a special committee composed of Drs. Vaughn, Walcott and Bryce, with instructions to report at the afternoon session of the conference.

Adjourned to meet at 2:30 P. M.

SECOND SESSION.

The President announced as the first order of business the reception of the report of the Committee on the Pollution of Streams, and the formation of Rivers Conservancy Commissions. Dr. Salomon, chairman of the committee, submitted the following:

Mr. President and Gentlemen of the Conference:

Your committee to whom was referred the duty to consider "the best means of securing the formation of Rivers Conservancy Commissions, composed of State and Local Boards of

Health, and to recommend such legislation as may be necessary to secure the desired result; and also to consider and report upon the sanitary value, especially to municipalities, of the purification of water in polluted streams, either by the distance which such polluted water has traveled or by means of filters or storage beds or by other artificial means," beg to submit the following report: As was fully exposed in the discussion at the last Conference, the difficulty of obtaining concerted and uniform action preventing the pollution of streams is apparent. While one State may adopt effective sumptuary laws, a contiguous State, whose waters are the source of pollution of on-flowing streams traversing other States, may be without such legislation, and, as then shown, the control of the matter is beyond the jurisdiction of the State afflicted.

The formation of Rivers Conservancy Commissions naturally suggests itself as the best means of securing the desired end, said Commissions to be composed of representatives from Boards of Health of adjoining States. But we are at the onset met with a serious obstacle in the way of accomplishment of effectual work by the fact that even after the formation of such commissions and the adoption of suitable plans of coöperation, the proper legislation by individual State Legislatures will be required to make the plans effective.

By those who are familiar with State Legislation it will be easily comprehended what difficulties are to be met in securing uniform laws by all the States under which joint commissions can act, and the opinion is, therefore, expressed that owing to this cause and the unavoidable delays to be met in securing such legislation, even if favorable to the object in view, and consistent with all the requirements, the establishment of such commissions as suggested is considered impracticable.

Under the auspices of this Conference, whose principal aim is to secure co-operation of State Boards of Health in all matters pertaining to public health, uniform and concerted action on the part of State Boards would be easily accomplished, provided the necessary laws existed, but when we are confronted with the fact that under existing circumstances in most of the States special legislation will be required, the drawbacks already mentioned will be readily appreciated.

What then is to be done? Your committee believes that the proper remedy lies in national legislation.

As the general government has recognized the importance of, and has assumed, the control of all navigable streams for commercial purposes, it is equally as important and necessary that it should exercise control over streams for sanitary purposes. It has been demonstrated that legislation by an individual State has no effect in preventing the pollution of streams within its own borders through agencies in other States which are entirely beyond its control.

Therefore, the necessity for legislation by the general government, whereby practical and certain results can be attained, appears to your committee to be the only solution of the difficulty with which we are confronted.

Purification of water in polluted streams by the distance which such polluted water has traveled is a matter of such uncertainty that we may pass by this portion of our subject without serious consideration; for, except in rare instances, such as the lower Mississippi River and possibly a few other streams, the constantly recurring sources of contamination are so frequent as to preclude purification by oxidation or the action of infusoria.

Even in the water of the Mississippi River at New Orleans, which is probably less contaminated from sewage than any other stream in the thickly populated portion of the United States, we find the appearance of albumenoidal material in such quantities as to render the water at least suspicious from a sanitary standpoint.

It is generally conceded, and has been an accepted basis of computation that water containing an excess 0.10 to 0.15 parts of albumenoidal nitrogen in 100,000 parts of water is unfit for use for drinking purposes. While such waters may not produce disease, they are still looked upon as dangerous to health, and their use is generally condemned.

An analysis of Mississippi River water at New Orleans made by Professor A. L. Metz; Chemist of the Board of Health, shows the following results, expressed in parts per 100,000:

UNFILTERED WATER.

Free ammonia	0.016
Albumenoid ammonia	0.020
Nitrites	None
Nitrates	0.20

FILTERED WATER.

Free ammonia.....	0.009
Albumenoid ammonia.....	0.0025
Nitrites.....	None
Nitrates.....	0.020

In giving the result of this analysis we have omitted inorganic matters as having no bearing on the subject.

The figures are such as to demonstrate that unfiltered Mississippi water at a point far removed from sources of contamination, where every condition exists for its purification by the distance traveled, is nevertheless to be regarded as not the best for drinking purposes.

This illustration alone is sufficient to show that distance traveled is a small factor in the purification of polluted water. This being the case in the particular water mentioned our belief is strengthened in the unreliability of Nature's forces in this respect, when applied to streams whose sources of pollution greatly exceed the one under consideration.

This being admitted, attention must then be directed to artificial means, either mechanical or chemical, for furnishing pure potable water and leads to the inquiry as to the best methods of purification, and the fact that this inquiry has been deemed of importance as a part of the proceedings of this conference, and also that many of our health authorities are engaged in laborous and expensive experimentation, notably in the State of Massachusetts, is sufficient evidence that an efficient and economical method of purifying waters for domestic uses is imperatively demanded; for it must be borne in mind, while pursuing our investigations, that both requirements are absolutely necessary to the end in view; that is, economy combined with efficiency.

While it may be an easy and comparatively a not costly undertaking to deliver pure water to the citizens of towns situated on rivers whose only contamination is the clay or sediment which they carry in suspension, it is an entirely different matter when the water to be dealt with is such as is found in the Merrimac or other streams filled with pollution from factory waste, sewage, etc.

The treatment of sewage before being delivered into streams so as to render it innocuous, naturally suggests itself as the

prime factor in our efforts at water purification; but that is a question which is considered not strictly within the scope of the present report. As your committee understands it, the object of our inquiry is in reference to water which, being polluted, should be rendered fit for human use before being delivered to the consumer.

The extensive, careful and elaborate scientific experiments, which are being carried on by the Massachusetts Board of Health, first claim our attention.

Without entering into details with which all are familiar, through the exhaustive reports made upon this subject, it is only necessary to quote from said report to demonstrate what has already been accomplished and what is now being done. The main object of the work mentioned is to ascertain if filtration will accomplish the object in view; and it has undoubtedly been demonstrated that for waters polluted with sewage *intermittent* filtration affords results which have been entirely satisfactory.

To quote from the report:

"Filter tank No. 8. This large tank in the field, filled with fine gravel and coarse and fine sand, with a layer of loam eight inches deep, having its upper surface six inches below the top of the filter, has continued through the year (1890) to filter 1,500 gallons of city water applied daily on six days of the week. This is the equivalent of three hundred thousand gallons daily per acre for six days in the week.

"This filter has been filtering city water constantly for three years, giving an entirely colorless effluent. The total quantity filtered is the equivalent of 206,000,000 gallons on an acre. The average analysis of the effluent for the year 1890 to the end of November is as follows:

Free ammonia.....	0.007, or 41 per cent. of applied water.
Albumenoid ammonia..	0.0056, or 45 " " "
Nitrates.....	0.0239, or 134 " " "
Nitrites	none.
Chlorine.....	0.17.

"Number of bacteria per cubic centimeter, 56, or 47 per cent. of the number found in the applied water."

After giving details of analyses by months the report goes on to say:

"The most of the water was, during the day, about three hours passing through the sand, and this time has been sufficient for satisfactory nitrification to take place.

"The free ammonia of the effluent has been sixty-eight per cent. of that of the applied water, and the albumenoid ammonia has been reduced to 51 per cent. of that of the applied water.

"The great reduction of the organic nitrogen, as shown by the albuminoid ammonia and the conversion of this into nitrates is the important step in purification."

This single example will show that the experiments in filtration now being pursued by Massachusetts are deserving of the careful study of sanitarians, and although the work is still in progress and no definite final results have yet been claimed, there is no doubt that the desired end will soon be attained, and when published will fully answer satisfactorily the question as to the purification of the class of waters under consideration, and furnish information as to the best method for adoption by other health authorities and communities in their endeavors to furnish pure potable water.

For a full exposition of this subject your committee refers the members of the Conference to the "Report of the State Board of Health of Massachusetts, 1890, on the Purification of Sewage and Water."

Attention is also directed to the admirable work accomplished at Davenport, Iowa, in mechanical filtration, where there is a filter plant with a capacity of 7,500,000 gallons per 24 hours, which has been erected at a cost of \$100,000 and which is operated at an annual cost of about \$10,000 in addition to the cost of operating the waterworks system. (See monthly bulletin, Iowa State Board of Health, March 1892.)

A method of filtration to which attention is now being particularly directed is the revolving purifier process, or as it is frequently called, "The Anderson Process," the principle of which consists in the production of an intimate contact between metallic iron and the liquid to be purified by the showering down of finely divided particles of the metal through an onward flowing stream of the liquid.

The action of this process is two-fold, chemical and mechanical, and is thus described :

"On issuing from the purifier, the water or sewage under treatment is charged with a soluble ferrous salt which immediately begins to change into the insoluble ferric oxide by the

process of oxidation due to its contact with the air. The rapidity with which this precipitate forms varies considerably according to the nature of the liquid being purified.

"In the case of waters of the Mississippi, Missouri and Ohio rivers, which contain large quantities of clay mud, much of which is in such a finely divided condition as to seem to be permanently dissolved, the effect of agitation with scrap iron is to produce in the space of a few minutes a coarse flocculent precipitate which settles rapidly, leaving clear colorless water after a few hours sedimentation.

"Waters of this nature are especially easy to treat by the "Anderson" process, and the rapidity with which the clay is coagulated renders the process extremely economical. The cost of purifying water of this description at Dortrecht in Holland, is only \$1.10 per million gallons."

After treatment by this process, it of course remains to separate the precipitate before the water can be used for domestic purposes. This is easily accomplished in settling basins and by filtration through sand.

Henry Leffman, of Philadelphia, in a paper read before the American Water Works Association, speaking of the Anderson process, says: "The advantages of the Anderson process over other methods of purification and filtration are among others:

"1. The avoidance of the use of chemicals.

"Scientifically utilized, metallic iron, by its mere contact with impure water, produces by the help of the ingredients in the water, the salt necessary to produce purification. Natural oxidation causes this salt to act as a coagulant and further the action of ferric oxide or rust in its nascent state furnishes the power of destroying organic matter.

"2. The automatic and continuous renewal of the active surface of the iron.

"By means of the Revolving Purifier System, the various forms previously recognized as efficient purifiers of water can be utilized without incurring the mechanical difficulties resulting from their use in filters which become choked up and caked after a short time. * * *

"Owing to the completeness of the contact between the iron and water and the large surface of metal exposed, purification

is effected in a space of time of three and one-half to five minutes for moderately bad water, and in five to fifteen minutes for sewage effluents.

"3. The removal of micro-organisms to such an extent that the water as delivered is practically sterile.

"This extraordinary fact is conclusively proved by the experiments made at Antwerp by Prof. Van Ermengen on samples drawn at frequent intervals from the delivery pipes of the sand filters when supplying over 2,000,000 gallons per day. The 100,000 microbe colonies contained in a cubic centimeter of the Nethe water are reduced to an average of five colonies, which, considering the great difficulty of avoiding all contact with the air in these delicate tests, is equivalent to a complete destruction of the micro-organisms."

Repeated experiments on all classes of waters have apparently demonstrated satisfactorily results obtained by this process. It then only remains to ascertain the cost of its use on a large scale and to determine whether its economy warrants its employment.

Official inquiry through the Belgian Consul at New Orleans brought the following reply :

"It is yet difficult to estimate the exact cost of using the Anderson purificators. Up to date it has been very small. The motive power required to turn the apparatus is trifling. The cost of cleansing is really nothing, from the fact that the particles of iron are kept clean by reciprocal frictions. All oxidized matters are removed by the current of water and deposited on the sand filters. The quantity of iron used does not exceed one-tenth of a grain per gallon or about fifteen pounds per million gallons. The filings of cast iron that can be employed for the purification would cost perhaps ten shillings per ton, making the cost of iron employed amount to about three-quarters penny per million gallons. The cost of cleansing the sand filters averages twelve shillings per million of filtered gallons, including the cost of the purified water used to wash the sand."

"In our works at Waelhem we have established three Anderson Purificators No. 10, which can, together, purify 2,200,000 gallons of water per day. The value of these three machines is 1,350 pounds sterling, and the cost of their installation, including the building in which they are located, was about 300

pounds. The water retains no trace of iron after being filtered through sand. The daily consumption of water at Antwerp at this time of the year (July) is about 2,000,000 gallons, and it is all subjected to this process of iron purification."

From the foregoing it will be observed that the cost is remarkably low and constitutes a very small item in the question of obtaining pure water, and if it can be successfully applied to the waters of the Nethe at Antwerp, which are not only very turbid but also highly contaminated with organic matter, this process is entitled to our attentive consideration.

The "Spencer" and "Hyatt" Systems, in which clarification is based upon the use of iron as a coagulant, are also worthy of consideration, but your committee have no data of extensive operations upon municipal or large water supplies upon which to base conclusions.

Filter plants operated under these and other methods controlled by "The New York Filter Co." have been established in a number of cities for purifying the public water supply, the largest being probably that at Chattanooga, Tenn., under the process known as the "National," with a capacity of 4,000,000 gallons per twenty-four hours.

While reports from several of these plants are favorable as to the result obtained, the information as to the cost of plant and of operating same is meagre and furnishes no basis of conclusions as to their economy upon a very extensive scale.

In this connection it may be very interesting to state that the New Orleans Water Works Co. has just entered into a contract for a plant under patents controlled by "The New York Filter Co.," with a capacity of 20,000,000 gallons per day, with little or no material loss of pressure. The result of this work will be awaited with interest.

The investigations as to the use of iron as a purifier, made by Mr. L. H. Gardener, Superintendent of the Water Works at New Orleans, will be of interest. Extracts from his report on this subject follow:

"Looking to quick results and entire success in the object of purification, I am persuaded that the use of iron in some form is the true agency. It is difficult for one to read the experiences and opinions of those whose mission is to study the subject without concluding that filtration, on any scale, however extended, is but a system of straining, and that it has never

fully answered to desired results—this, whether the desired object be the elimination of sediment or of algæ, of spores, or of general organic impurities or defilement.

* * * * *

“For a very large or public supply it seems scarcely necessary to say that if prompt and economical results can be secured in reservoirs or tanks by defensible chemical precipitation or clarification, filters are not needed. The chemical clarification of water is not a new proposition. It has been used, with various agencies, for centuries. The methods and agents have varied with the surrounding conditions, just as have the supposed adaptation of herbs and other natural remedial agents for the cure of disease.

“Among the agents (other than iron) thus used may be mentioned lime, alum, borax, oxalate of potassa, and the now unknown vegetable processes of the ancients along the banks of the Nile and elsewhere. To these may be added the use, under special circumstances, of permanganate of potash.

“After experimenting with all the known agents, I express my preference for iron. I am also convinced that a *solution* of iron is of easier mechanical application to water, and by its fluid adaptability is subject to such control as the character and treatment of the water may demand. This graduated application will in intelligent hands obviate the necessity for subsequent filtration. The only trouble would seem to lie in the direction of the cost of the solution.

“The salts of iron have hitherto been made only upon a limited scale and for medicinal purposes. Their production in such a manner, or after such a formula, would of course be too expensive, if not prohibitory, for the purpose suggested.

“If, however, red hematite iron ore be employed, and treated simply with hydrochloric acid, bringing it to say 50° B., or to say 1.50 specific gravity, the solution suggested can be made in large quantities at a very low cost.

“With such a solution I conducted a series of experiments of a minor and preliminary character. I verified them in the reservoirs of the New Orleans Water Works. The water thus clarified was analyzed with entirely favorable results by Prof. Chandler, of New York, and by Professors R. N. Girling and Joseph Jones, of New Orleans.

“Later I verified the result upon the largest scale permissible

in the United States, viz.: in the settling basins at St. Louis. In August, 1884, by the courtesy of Col. T. J. Whitman, C. E., Water Commissioner of St. Louis, and aided by Mr. Wm. Golding, M. E., of New Orleans, I clarified a body of 13,000,000 gallons. The result was in every way prompt and satisfactory. The solution used in the demonstration, the water in various stages of precipitation, and the colorless resultant water were all subjected to chemical analysis, and with unqualifiedly favorable reports. The action is partly chemical and partly mechanical. In the water of the Mississippi there exist carbonates of lime and magnesia. Contact with the chlorine in the iron solution forms chloride of calcium, and coincident therewith is the formation of a hydrated oxide of iron. This latter settles rapidly, carrying with it all suspended matters, leaving the water clear. The use of a solution of 1.60 specific gravity in the proportion of one part in 20,000 clarifies the muddiest water, and neither hardens the water nor leaves any trace of the iron therein. A smaller amount may be used successfully.

"The waters of the Mississippi River at New Orleans can be rendered crystal clear by the process described, with a rest of say eight hours in reservoir, at a maximum running cost of one cent per 1,000 gallons. The cost will be less if a longer period of rest be allowed. It will also be decreased if the clarifying material be manufactured by the water company or department. The cost of a plant for its manufacture will not be large.

"After many experiments, and on several waters, which I confess were to a large extent empirical, I am convinced that iron is the agent of all agents to which we must look for the cure of most, if not all, of the evils of which our communities now complain, in connection with their domestic water supply. If surroundings will permit its economical addition, let the quantity of iron be reduced and the feature of *aeration* be added, and perfect results could not be avoided in treating any water supply.

"In reference to the removal of organic matter by this agency, Nicholls, in speaking of the Antwerp process, says (Nicholls on Water Supply, p. 178): 'Although . . . it is difficult or impossible to obtain a water free from iron, there is no doubt that a considerable portion of the dissolved organic matter is removed, and it is claimed that the bacteria and bacterial germs



are completely removed. These claims are borne out by the experimental investigations of Bischof, Hatton, and others, and give to the material a great theoretical advantage.' ”

With the exception of the filter-beds established at Lawrence by the State Board of Health of Massachusetts, already referred to, and which are now on an experimental scale only, we have no reports of satisfactory results by this method of purification, and it remains to be seen whether the Lawrence results will prove equally as satisfactory, and be at the same time economical, on a large scale.

At Poughkeepsie, N. Y., filtering beds with 29,000 square feet of surface were established at a cost of \$54,000, and the cost of maintenance amounts to about \$3 per million gallons, not allowing for interest on the plant or the cost of pumping; altogether a too expensive system for general adoption.

Taking into consideration the interest on the plant and the cost of maintenance irrespective of the cost of pumping it has been estimated that the cost of the filter-bed system would amount to about \$11 per million gallons, and this estimate has been generally accepted as correct by careful investigators interested in the subject.

Commenting upon this, Mr. L. H. Gardner pertinently says:

“Several cities in the United States have filtering beds or filtering galleries; and while the literature on water-supply alludes to them in respectful terms, the success of their systems in the desired direction does not appear to be generally commended by any writer in any respect or from any point of view. There is a singular and almost total absence of information as to the cost of maintenance.”

Your committee, therefore, in respect of this portion of the duty assigned, begs to submit the following conclusion:

That while recognizing the importance and magnitude of the subject under consideration, and while sensible of the necessity from a sanitary point of view of providing pure water for domestic purposes it is unable to report finally upon the practicability from an economic standpoint of filter beds for the water supply of large cities; but would await further results of the experiments now being carried on by Massachusetts; and, while believing that the results obtained meet fully all the requirements, the question still remains as to whether

the cost and maintenance of filter beds will warrant their general adoption on an extensive scale.

As to the use of iron as a coagulant and oxidizing agent, the results seem to warrant the recommendation of purification by this method without recommending any particular process.

Settling basins may, and probably do, answer every sanitary requirement where the water from streams only contains inorganic matter in suspension. But as most of the streams from which our water supplies are derived are contaminated with matters seriously dangerous to public health, and as this evil is constantly growing more threatening, and waters are becoming every where more and more polluted with sewage, factory refuse, etc., the matter of settling basins does not come within the purview of our serious consideration.

Finally, your committee recommends that all State Boards of Health be solicited to give the matter of pure water supply their most earnest consideration, and after careful inquiry as to the needs of the particular locality within the jurisdiction of each, urge upon the civic authorities the necessity for the adoption of such measures as shall guarantee to its citizens water free from impurities dangerous to public health.

The importance of legislation in this regard as a factor in preventing illness and death can not be too strongly insisted upon. Respectfully submitted,

LUCIEN F. SALOMON, M. D., *Chairman*,
C. A. LINDSLEY,
C. N. METCALF.

On motion of Dr. Bryce, the committee that just made its report was instructed to meet and act with the committee appointed at the morning session, and said joint committee make a report before the final adjournment of the Conference.

The next topic discussed was the one proposed by the State Board of Health of Connecticut.

(a) What is the most practicable way of providing a hospital for contagious diseases for a town or community of a population of 5,000, the same to be always ready for the reception of patients?

(b) What will be the average cost of maintaining it per annum, the probable number of patients it would be called upon to receive being regarded in the estimate?

Dr. Lindsley, of Connecticut, said :

"It was not my purpose in proposing this subject for consideration to-day to make an opportunity for presenting my own views upon it.

"Indeed, I did not expect to be present at this meeting. But I look upon this question as one of great importance, and as one which, in the early future, must find a solution in some practical way.

"The prompt notification of the presence of contagious diseases, and the ready and satisfactory means of isolating such diseases are the most essential elements in any known means of restricting epidemics.

"I know that the topic is not a new one, but on the other hand is one which has arrested the thoughtful consideration of every active health officer in the land, and I hope by bringing it to the attention of this body of sanitarians something pertinent to the necessities of the public would be presented.

"The simple plan for an isolation hospital which I am about to submit to you will, I trust, afford a target for criticism and an incentive to suggestion from some of you which will develop a method more efficient and more practical. Every local Board of Health realizes at times the great desirableness of a place where a patient with a contagious disease could be well taken care of, and so isolated that he would not be a source of danger to others.

"To provide such a place seems beset with many and great difficulties. To build and equip a hospital for such a purpose, with nurses and other necessary attendants, always in readiness to receive patients, is thought beyond the financial ability of all small towns. It would appear to be equally impracticable for a number of neighboring towns, to unite in providing such a hospital for common use, for that implies for many of the patients too long a distance for transportation.

"Now let us clearly understand what is the real use of an isolation hospital. Is it, as many think, chiefly useful to care for patients in an epidemic of contagious disease? No, that is not its best or most important use. An isolation hospital serves its highest purpose as a preventive of epidemics. How? Simply by caring for the first case in a community. Contagious diseases only spread by contagion. If the first case of any contagious disease is so guarded that others are not exposed to

it, there can be no epidemic. But with every additional case which occurs, the difficulties of preventing still further contagion, are multiplied. Hence, to prevent an epidemic it is only necessary to keep the first case from communicating the disease to others. That is the best work which an isolation hospital can do, viz., affording the place and means of taking proper care, in all respects, of the first case of any contagious disease which may appear in any village or town.

"Hospitals are usually large buildings, imposing, costly structures, an isolation hospital need not be a large building. Any good common sized house, with two or three well ventilated rooms in the upper part, in a salubrious location, sufficiently remote from other houses to involve no danger to their occupants, affords all that is needful in way of building. A little stock of ordinary medicines, and a good stock of approved disinfectants, an abundant supply of bed linen, towels, etc., and some special furniture and appliances which any good medical man could suggest, are all that would be needed in the way of equipment.

"To provide such a place of refuge for a person with a contagious disease, is not beyond the easy ability of any town in the union.

"In most towns, a house which would satisfactorily serve the purpose could be found, which could be bought or rented. Or better, select the site and build for the purpose specially. Next find a reputable family of adult persons, of not more than two or three in number, one of whom shall be a man, all of good habits, steady and trustworthy people. Give them the rent of the house free. Contract with them to receive and nurse, under the direction of the physician, what patients the Board of Health may send them, at a stipulated price.

"In this way it is quite practicable for any town or village, to have a hospital for contagious diseases at an inconsiderable cost, which would be saved to the people ten-fold, with every first case of contagious disease it cared for.

"Above all things do not call it a "pest" house. Do not damn it with a name which will shock the sensibilities of those who may need to go to it. Call it a "Retreat," a "Temporary Home," or by any name which will not excite disagreeable associations."

Dr. DeVaux, said :

" While he thought the suggestions made by Dr. Lindsley were practical, he was of the opinion that it was necessary to have legislation on the subject, and from recent correspondence with Canadian physicians, he was satisfied that they had the very best laws.

Dr. Lachapelle explained the methods employed in the Provinces of Canada.

Dr. Mann thought the subject brought up the relation of State Boards of Health to Municipal Boards, and he believed it to be a principal duty of the State Boards to constantly urge the Local Boards to do their duty, especially when contagious diseases make their appearance in a locality. He believed in the establishment of hospitals for the treatment of these diseases; but that they should not be called pest-houses, but instead should be called by their proper names, Contagious Disease Hospitals, for the people have an idea that if any one is taken to a pest-house he is sure to die.

Dr. Thompson said that this subject had been discussed time and again. It was impracticable, and in this day and age there is not a Legislature in the Union that would pass a law compelling a mother to send or take her child affected with scarlet fever or diphtheria to a hospital of such a character. If you have a hospital for diphtheria you must have one for scarlet fever and all the other contagious diseases. He considered small-pox one of the easiest things imaginable to manage, but when it came to typhoid fever it was an entirely different affair and a difficult disease to control.

Dr. Baker did not know but what it was true, just as Dr. Cochran said to him, that it was a local question.

He considered the management of diphtheria in the northern part of our country one of the greatest importance. It was not small-pox that we wished to consider—we knew how to manage that—but how to manage these other diseases that kill us are the ones we wish to deal with.

We must have these isolation hospitals in this northern country in order to effectually control them. He said that Dr. Walcott this morning said that the water question was the most important one that would come before this Conference. Water pollution meant typhoid fever. The chart which he

exhibited showed that the deaths from diphtheria and scarlet fever doubled the number of deaths from typhoid fever.

Dr. C. A. Lindsley said he was in an isolation hospital in New York City last week in which diphtheria and scarlet fever were received under the same roof, where they were separated only by the partitions between the rooms.

Dr. Emmert said this subject had been well discussed, but there was a social side to the question.

He would not dare go back to his State and advocate such a measure. The people were not sufficiently educated on the subject.

You can not take a child from its mother and send it to a hospital. The people would not submit to such a procedure. As a scientific proposition believed it was all right, as he believed in limiting the force as much as possible.

Dr. Walcott said that in the city of Boston they had such a hospital, which at times has been crowded.

Dr. Lachapelle believed that the sick from these diseases should not be forced to go to such hospitals, but it should be left optional with the people.

Dr. DeVaux announced that his State would support the proposition.

Dr. Wingate spoke as follows:

"I do not understand that this resolution implies obligation, but is simply a recommendation, and I sincerely hope it will be adopted by this Conference. I think it would be an exceedingly unfortunate step to reject such a resolution after it has been presented to this body.

"Efforts are being made all over this country, by health officers and others, to establish these hospitals, and the friends of these measures are looking anxiously to the acts of this body for support and encouragement, and if this conference of representative sanitarians from the different States rejects a resolution simply recommending that such hospitals be established it would be unfortunate indeed.

"In regard to the remarks made to the effect that sending people to a 'pest house' in this age is a relic of barbarism, I desire to say that that may be so, for the time has come, with our knowledge of the management of contagious diseases, when we have no more use for the 'pest house,' but we need hospitals, and there is no reason why an isolation hospital can

not be made as agreeable a place for one sick with a contagious disease as any hospital or home, and I think it savors more of barbarism not to care for these cases in hospitals properly constructed and managed, than to let them expose the public and endanger the lives of others.

"In my own city I am trying to move the word 'pest house' from the minds of the people, and to establish a hospital where people will not have to be taken by force when ill with a contagious disease, but where they will be anxious to go, and I am succeeding very well. In regard to its being 'an outrage' to place people ill with different contagious diseases in the same hospital, I will say that we have treated two or three different diseases at the same time in our hospital, and with no danger to each other. They were of course treated in different wards, and the wards are specially arranged for caring for such cases, and I maintain that there is no more danger in treating such cases in that way, under modern management of such hospitals, and with trained nurses, than in treating them in separate buildings, and instead of it being 'an outrage,' it is the ideal way of treating and preventing the spread of all forms of contagious diseases.

"For these reasons, Mr. President, I am most heartily in favor of the adoption of the resolution."

The following resolution was presented and unanimously adopted:

Resolved, That it is the opinion of this Conference that in all localities where diphtheria, scarlet fever and small-pox are liable to occur, hospitals should be always kept in readiness, where patients with these diseases can be cared for.

The next question considered was "The Michigan Plan of Sanitary Convention." Prof. Delos Fall presented the following paper on the subject:

SANITARY CONVENTION.

BY PROFESSOR FALL, ALBION, MICH.

The influences which finally led up to the establishment of the Michigan State Board of Health had a beginning somewhere in the brain and heart of some liberal minded citizen,

on whose broad and sympathetic spirit caused him to plan large things for his race. Preventive medicine was very little thought of in those days. The physician's duties were comprised in the one line of curing the sick, rather than preventing them from becoming so. Sickness is the inevitable lot of man, they said, and the physician is needed to ease the pain and restore to health, or if perchance it be that last sickness, which is unto death, his ministrations would make easier the dying hours. This was the creed of less than a generation ago.

But some one thought differently and that some one influenced others, until finally, by petition and memorial, by personal influence with Legislatures, and in other ways, in 1873 the law was passed, which established the Michigan State Board of Health.

Section two of the act establishing the Board, defined its duties, provided for the election of a secretary and executive officer and defined his duties.

Prior to this, however, the work which such a board ought to do, had been defined by the man who became its first secretary, and who, we are glad to say, still serves us with signal ability. He had already been engaged in public health work, and as Superintendent of Vital Statistics, had commenced the work of gathering, tabulating, and preserving the statistics of sickness for the State. He had been a soldier, and as such had been observant of the great destruction of human life by the ravages of war. Returning to the life of a civilian, and having been brought face to face with death's doings, with the ravages of disease, and at the same time possessing a true scientific instinct by which he quickly connected cause and effect, he declared that "grander victories of greater importance to the people remain to be achieved than any which have heretofore resulted from warlike methods. To the peaceful hero who shall call forth and so marshal facts and generalize the scattered forces of knowledge as to lead to a victory over any one of the prominent causes of death which now annually destroy our citizens by hundreds or by thousands, humanity may well accord a higher praise than to the most successful of warlike generals."

Section 2 of the act establishing the Board says: "The State Board of Health shall have the general supervision of the interests of the health and life of the citizens of this State."

They shall especially study the vital statistics of this State, and endeavor to make intelligent and profitable use of the collected records of deaths and of sickness among the people; they shall make sanitary investigations and inquiries respecting the cause of disease, and especially the epidemics; the cause of mortality, and the effects of localities, employments, conditions, ingesta, habits and circumstances on the health of the people. They shall, when required, or when they deem it best, advise officers of the Government, or other State Boards, in regard to the location, drainage, water supply, disposal of excreta, heating and ventilating of any public institution or building."

Section 5 of the same law defines the duties of the Secretary, and, among other things, it requires that "he shall collect information concerning vital statistics, knowledge-respecting diseases, and all useful information on the subject of hygiene, and through an annual report, and otherwise, as the Board may direct, shall disseminate such information among the people." The simple phrase "and otherwise," is perhaps the only sanction which that act gives to the holding of sanitary conventions.

The first recorded address made before the Board is worthy of repetition here as showing how early the members grasped the true idea of the nature of their work and the best methods of carrying it out.

Dr. Homer O. Hitchcock was temporary chairman of the first meeting of the Board held in Lansing July 30, 1873. He gave a short introductory address outlining the prospective labors of the Board. Among other things, he declared the work of the Board to be "the making a State Board of Health popular with, because useful to, the people of the State; to educate the people in respect to the nature and causation of diseases and the means for their prevention." "We must be ready," he said, "to point out the influence of the topography, geology and climate of the various parts of our State upon the health of its citizens; the importance and intimate relation of drainage and sewerage to the health of families and whole communities; to call the attention of the people to the influence of various kinds of occupations, food, drink and clothing, as well as the structure of their public and private buildings upon the development of certain forms of disease; and most especially to point out the vast importance to the welfare and

perpetuity of the State of properly rearing, training and educating the young; and to point out the nature and causes of epidemics, endemics and contagious diseases, and the means for their prevention or eradication."

The work of the Board was therefore of a two-fold nature, viz.: (1) To collect information and (2) to disseminate it among the people.

To this line of work the Board has held itself steadfast during the almost nineteen years of its existence.

How may the people best be reached; how shall the information gathered by the Board be brought before their attention? These questions have received various answers. At first the Board sought to do its work by sending out circulars, and their annual reports. They were sent largely to health officers and not directly to the people.

These circulars were very emphatic in their utterances; one, for example, sent out in 1874, contained specific directions for the restriction and prevention of small-pox. In the same circular are these words: "Scarlet fever is a contagious or infectious disease, and as such requires the same means of prevention as small-pox (except vaccination), including 'isolation of the infected person, absolute quarantine of the household or hospital where the diseased person is lying, cleanliness, ventilation,' and all the methods of disinfection hereinafter enumerated in connection with the disinfection of excreta from the infected, the disinfection of clothing, bedding, furniture, and rooms, and also fumigation. When scarlet fever exists in a community the preventive means should be applied with the same energy and perseverance as is done during the prevalence of small-pox." The circular further said: "The number of deaths in Michigan during the year 1870 from small-pox were nine (9); from scarlet fever, eight hundred and fifty-two (852). If it is worth while to attempt to decrease the number of deaths from small-pox below nine (9) a year, is it not an imperative duty to reduce the number of deaths from scarlet fever from 852 a year to a number that will, in a measure, approximate that of deaths from other contagious and infectious diseases?" Average death rate from 1878 to 1889, inclusive, was 386; in 1889, 240.

But these circulars did not reach the people, and if they did, they lost much of their forcefulness. The influence exerted

and the interest aroused by them could not be compared to that produced by the uttering of the same truth directly to the people by word of mouth.

This thought seems to have been the inspiration which came to our veteran sanitarian, Professor R. C. Kedzie. In his annual address for 1878, as President of the State Board of Health, he proposed, the holding of sanitary conventions in different parts of the State, to consider and discuss sanitary matters. A committee was immediately appointed to consider the best means of inaugurating such sanitary conventions.

It was thought best that each of the conventions should be held by the joint action of the State Board of Health and a committee of citizens of the place where the convention should meet. At the April, 1879, meeting the Board voted to hold two such meetings, the first in the city of Detroit and the second in the city of Grand Rapids, on condition that the people of the places named would defray the local expenses of the conventions; also that certain influential gentlemen should be invited to take part in the way of addresses and papers, and that manufacturers and dealers in sanitary appliances be invited, at their own expense, to forward their goods for exhibition. It may be said that the latter feature was carried out and a number of sanitary appliances were exhibited and reported upon. It was soon discontinued, however, probably because those dealing in these articles made an unfair use of any good words which the Board or prominent sanitarians might say of them by way of advertising.

These two conventions were held and proved to be very successful.

As Dr. C. C. Yemans, Secretary of the Detroit Convention, said in his official report, "all in attendance were well pleased with the session of the first sanitary convention and regarded the work done as equal to the anticipations of its most enthusiastic friends."

Thirty-seven such conventions have been held in different parts of the State. From the first meeting held in the metropolis and the second held in the second city, the convention has gone into other places, nearly all principal places having been visited as well as many smaller ones. Our audiences are almost always large and always enthusiastic. The people are eager to learn and ready to practice when they have been convinced of the best way of producing sanitary reforms.

That great good has been accomplished there can be no doubt. In a number of cases the convention has been followed by improvements in the water supply, water-works have been built, sewer system established, better methods of disposing of waste and excreta have been adopted, a better support given to the health officers, nuisances have been abated, and many other public reforms have been the legitimate outcome of a sanitary convention. Added to these public benefits are those coming to the hundreds of households which have heeded a personal appeal made to them and have entered upon reforms in domestic sanitation which have been productive of great good.

The writer of this paper considers that his task has been accomplished when he has told in the briefest way the method of procedure by which one of these conventions is planned and carried out. The various steps in the process are given in the order which characterizes the conduct of every convention. First, then, the initial step is never taken by the State Board of Health. That is taken by some person of the place who, for one reason or another, thinks it desirable that a convention should be held there. That person interests the public in the project enough to obtain the signatures of prominent citizens, the Mayor and Council, the clergy, members of the medical fraternity, lawyers, teachers and others, to a petition which merely recites the desire to have the convention, others give the reasons. One city asks it because an epidemic of diphtheria is prevailing, another because of a poor water supply causing typhoid fever, another because the Common Council have abolished themselves by formally abolishing the local Board of Health, etc., etc. One appeal will be given in full.

This petition shows one feature that is unique, viz.: It is the only one the expenses of which have been borne by the citizens of the place.

This convention was held in compliance with an invitation from the Mayor and Council and citizens of Iron Mountain, as follows:

IRON MOUNTAIN, MICH., October 6, 1892.

Henry B. Baker, M. D.,

Secretary State Board of Health, Lansing, Mich.:

DEAR SIR—We have been having a rate of death in this city from typhoid fever that is simply awful. This sickness

has become so serious that the City Council recognized the fact that something had to be done to get the State Board of Health to come here immediately. And on last Monday night they appropriated the sum of \$250 to defray the expenses of your Board. As the cold weather sets in so early here it would be advisable for the Board to come immediately.

Rev. A. E. Cook, who has written to you in regard to this matter, will forward you the necessary petition, and as the City Council will defray your expenses, I know and hope you will do everything in your power to help us in this matter.

Please come immediately and assist to save the lives of the balance of the citizens.

Yours truly,

F. J. TRUDELL,
Mayor.

MEMORIAL FROM CITIZENS OF IRON MOUNTAIN, FOR A SANITARY CONVENTION.

IRON MOUNTAIN, MICH., October 2, 1891.

To the Honorable the State Board of Health, Lansing, Mich.:

GENTLEMEN—The undersigned citizens of Iron Mountain, Mich., believing that the public discussion of questions relating to the public health, under the auspices of the State Board of Health, would result in great benefit to our city, hereby respectfully petition that a sanitary convention may be held in Iron Mountain, under the direction and with the co operation of your Board, or a committee thereof, at such a date prior to Nov. 14 as you may be pleased to select.

(Signed by 35 citizens.)

These invitations are accepted by the Board, and, as far as is practicable, the conventions are held in the order in which the invitations have been received. A committee of the Board is appointed to visit the place and confer with a like committee of the citizens which in the meantime has been appointed at a public meeting held for that purpose.

At the joint meeting of these committees all the details of the convention are worked out; the time of holding the convention, number of sessions, place of meeting, subjects to be discussed, etc., etc.

The permanent officers of the convention are chosen, a President, a number of Vice-Presidents, a Secretary, an Executive Committee, Reception Committee and Music Committee. At this same meeting persons are chosen to prepare papers upon the subjects assigned. Usually the papers are prepared by local persons, enlisting for this purpose those prominent in all walks in life, lawyers, physicians, teachers, preachers, editors, engineers, politicians. Some one is also appointed to lead in the discussion which follows; very often some member of the State Board. Sometimes this order is reversed, a member of the State Board preparing the paper and some one else leading the discussion.

And now if the convention is to prove a success much preliminary work must be done and for this the Secretary will be largely responsible. That he will be a good man for this work has been considered before he was appointed to this office. The State Board prints preliminary notices and the same number of envelopes with the date of the convention and the Secretary's name printed upon them. With these the Board also sends five dollars' worth of postage. These notices are sent by the Secretary to prominent people in the adjacent cities and towns, and in many cases a personal letter is written giving a special invitation to attend. The Secretary follows up the persons appointed to prepare papers, he looks after the Music Committee, he sees that the Executive Committee does its work, leasing the hall for the conventions, etc.; he inserts notices in all papers of his own and surrounding towns; in short, he is instant in season and out of season to see that no part of the work is neglected. Care should also be exercised in the choice of a person for the President of the convention, one who will be familiar with the proper proceedings of a deliberative body and who will see that the program is carried out promptly and unnecessary and tedious discussions cut off. When the time draws near the program is formally made out and is printed by the State Board.

The members of this Conference are all doubtless familiar with these programs; if not, they can be supplied with sample copies.

What may be called the evolution of the convention program is an interesting study. The early programs contained such subjects as "Forests and Trees as Sanitary Factors," "Training Schools of Cookery," "Cosmetics," "Texas Cattle

Disease," etc. These are good subjects, but they do not bear directly on those conditions by which lives are lost; they are a long way subordinate to the study of the restriction and prevention of dangerous communicable diseases; to do justice to that first program, however, it ought to be stated that it contained one paper on "The Limitation of Pulmonary Consumption," which, in the light of recent advances concerning that disease, seems almost prophetic, and a paper in the second program on "General Sanitation—its importance to the public welfare and a plea for better methods" was in many respects far in advance of the time for which it was written. Our later conventions, however, have been given largely to the education of the people regarding the germs of disease, how they are studied, how they develop, how diseases are communicated, how managed, restricted, prevented.

The discussion of the water supply, for example, has for its purpose to show the relation which that water may have to certain micro-organisms which are capable of living in it and producing disease.

A proper system of sewerage is urged because it diminishes the chances for the spread of disease germs.

The proper disposal of waste and excreta is discussed because in these forms of decaying organic matter is recognized one of the most dangerous possibilities of the spread of a communicable disease.

In discussing the abatement of nuisances in general our plan is always to call attention to the fact that the greatest nuisances, the ones most to be dreaded, those which must be removed at whatever cost of time or trouble, are those forms of infected matter which are capable of producing disease and death.

In a word, the program turns about a center composed of those communicable diseases which are the causes of the greatest mortality.

The sessions of the convention are four or five in number. The first one is usually at two or three o'clock in the afternoon, a second in the evening of the same day. If the number of papers to be presented and the interest of the people warrant it, a session is held in the forenoon of the second day. If not, a session is held in the afternoon and a closing session in the evening.

Of course it must necessarily be, in these efforts to secure

the co-operation of the general public in sanitary matters, that all scientific nomenclature is dispensed with and while the truth is accurately told it is clothed in popular language, the language of the people rather than that of the scientist. As one has put it, "Here statistics become charged with the enthusiasm of the speaker, the inattentive become attentive and the blind to see." Following the presentation and discussion of a special subject, the circulars issued by the State Board bearing on that subject are distributed among the audience, and when the proceedings are published several hundred copies of the entire convention number are sent to be distributed among those interested.

As a layman, I may be permitted right here to record my high appreciation of the hearty support given these conventions by the resident members of the medical fraternity. They have been foremost in the work of bringing about reforms which are designed to reduce sickness and death to the minimum. Self interest, the duty which compels all to look after one's own interests, is a "first law of nature" and physicians are not exempt from it, but in the majority of cases they are the pioneers in the work of reform; they are the educators through whose teachings the people learn the art of preventing disease and prolonging life. On the other hand, the convention has not been without its reflex influence on the physicians themselves. They appeared more largely than any other class on the programs, and the people hear, for the first time, their own family physician, it may be, uttering sentiments which are convincing truths to them that he is governed in his practice by the principles of preventive medicine rather than a mere desire to cure from sickness. Their confidence in him is thereby strengthened and his practice benefited accordingly.

Concerning the publication of the papers presented at these conventions, it should be said that they are carefully edited before being published, all errors are corrected as far as possible, all irrelevant matter pruned out, etc., etc. A rule very early adopted by the Board is strictly adhered to. It is as follows: "*Resolved*, That no papers shall be published in the annual report of this Board except such as are ordered or approved for purposes of such publication by a majority of the members of the Board; and that any such paper shall be published over the signature of the writer, who is entitled to the

credit of the production as well as responsible for the statement of facts and opinions expressed therein." At the present time it is usual to print two thousand copies of the proceedings. The aggregate of printing done for the thirty-seven conventions has included about 55,500 announcements and invitations, 66,600 programs and 74,000 copies of the proceedings; that at the average rate of 1,500 announcements, 1,800 programs and 2,000 proceedings for each convention.

What does a sanitary convention cost? The answer given to that question depends upon how you make the word of instruction of the people. The mere expense of holding the convention is comparatively small, but if the proceedings are published for distribution among the people the expense is doubled. The plan followed by our Board is as follows: The citizens of the place in which the convention is held provide a hall in which to hold the meeting, pay expenses of heating, lighting, janitor, etc., pay any necessary expense for local advertising, for music and the like. They do not generally entertain the members of the Board who attend. The Board assumes the expenses of the members, hotel and traveling, the printing of invitations, programs and proceedings, postage for the Secretary, etc.

The following schedule shows in detail the expenses incurred by the four conventions held in the year 1890. Those held in Alpena and Charlevoix were in distant parts of the State, making the traveling expenses of members correspondingly heavy.

Expenditures on account of the four sanitary conventions, held under the auspices of the Michigan State Board of Health, during the calendar year 1890:

COST ON ACCOUNT OF THE LAPEER CONVENTION.

Printing announcements and ruling note	\$4 03
Printing programs	6 23
Composition and press work of Proceedings	59 10
Corrections on the same	1 80
Covers for the Proceedings	4 80
Folding, stitching and covering	6 00
Postage to the Secretary of the Convention	5 00
Reprint No. 333 (making over form, press work, binding)	1 70
Reprint No. 334 (making over form, press work, binding)	1 80
Reprint No. 335 (making over form, press work, binding)	3 60
Reprint No. 336 (making over form, press work, binding)	1 35
Covers to reprint No. 334	30

Printing envelopes for use of Secretary of Convention	\$0 45
A. A. Clark, expenses	7 51
John Avery, M. D.	12 31
H. F. Lyster, M. D.	5 50
Delos Fall, M. S.	14 45
H. B. Baker, M. D. (expenses in making arrangements)	5 01
H. B. Baker, M. D. (expenses in attending the convention)	7 96
Postage for announcements sent out	6 55
Postage for programs sent out	6 16
Envelopes used sending announcements and programs	2 03
Total	\$163 64

COST ON ACCOUNT OF THE ALPENA CONVENTION.

Printing announcements and ruling note	\$2 93
Printing programs	5 75
Printing envelopes for use of Secretary of Convention	45
Composition and press work on Proceedings	69 91
Correction of the proof of the Proceedings	4 80
Covers for the Proceedings	4 80
Folding, stitching, binding Proceedings	6 00
Reprint No. 343 (making over form, press work, binding)	1 90
Reprint No. 344 (making over form, press work, binding)	1 50
Reprint No. 345 (making over form, press work, binding)	1 50
Reprint No. 346 (making over form, press work, binding)	1 70
Postage for Secretary of Convention	5 00
A. A. Clark (expenses)	21 75
H. F. Lyster	25 00
Delos Fall	25 50
H. B. Baker (making arrangements)	17 22
H. B. Baker (attending the Convention)	21 50
Postage for announcements sent out	6 30
Postage for programs sent out	6 40
Envelopes used in sending out programs and announcements	2 30
Total	\$275 94

COST ON ACCOUNT OF THE BATTLE CREEK CONVENTION.

Printing announcements, ruling note	\$2 68
Printing programs	6 95
Printing envelopes for use of Secretary of Convention	45
Composition and press work of Proceedings	45 08
Covers to Proceedings	4 80
Folding and stitching, covering Proceedings	6 00
Reprint No. 337 (making over form, press work, binding)	1 55
Reprint No. 339 (making over form, press work, binding)	1 55
Reprint No. 340 (making over form, press work, binding)	1 70
Reprint No. 341 (making over form, press work, binding)	1 70

Postage for Secretary of Convention	\$5 00
A. A. Clark (expenses)	6 95
John Avery	11 00
H. F. Lyster	12 40
Delos Fall	3 50
H. B. Baker (attending the Convention)	8 72
Postage on programs sent out	6 25
Postage on announcements sent out	5 20
Envelopes used in sending out programs and announcements	1 83
Total	<u><u>\$133 31</u></u>

COST ON ACCOUNT OF THE CHARLEVOIX CONVENTION.

Printing announcements, ruling note	\$2 98
Printing programs	6 25
Printing envelopes for use by Secretary of Convention	45
Composition and press work on Proceedings	36 31
Covers for the Proceedings	4 80
Folding, stitching, covering Proceedings	6 20
Reprint No. 349 (making over form, press work, binding)	1 70
Reprint No. 350 (making over form, press work, binding)	1 35
Postage for Secretary of Convention	5 00
John Avery	20 50
Arthur Hazlewood	23 90
J. H. Kellogg	17 95
V. C. Vaughan	24 60
H. B. Baker (making arrangements)	17 23
H. B. Baker (attending the Convention)	20 05
Postage for programs sent out	7 00
Postage for announcements sent out	6 75
Envelopes used in sending out programs and announcements	2 20
Charlevoix	<u>\$205 22</u>
Battle Creek	133 31
Alpena	225 94
Lapeer	<u>163 64</u>
Average	<u><u>\$182 03</u></u>

It remains to make mention of the part taken by the members of the State Board of Health in these conventions. Very much of their success is due to the loyal support given them by all the members, often at a great sacrifice of time and labor. The Secretary has been present at every session of every convention, and four or five of the members have also been in attendance at each convention.

A study of the program shows that the names of members appear either for papers, addresses or discussions in the aggregate 225 times, or an average of over six such exercises for each meeting.

The announcement that at each session a prominent sanitarian will be present goes very far toward attracting large audiences and insuring a successful meeting.

I will say in closing that this paper has not been written with a view to defend the sanitary convention. It needs no defense. Each one has been its own justification, as the people are constantly testifying. It is a settled policy with our Board, and the coming years will see the number of such conventions larger rather than smaller.

Drs. Thompson and Avery discussed the subject.

What measures can be enforced to prevent the spread of infectious diseases in rural districts was the next question that demanded the attention of the Conference.

Discussion was opened by Dr. Reeve.

Dr. C. A. Lindsley had nothing to add in regard to educating the people, but had something to say about health officers. In Connecticut they had a health officer in every town and all of them were not medical men. Frequently many of them did nothing, paying attention to their private business and allowing the public business to take care of itself.

In many cases the officers were not paid sufficient to cause them to give proper attention to the business of the office, and in many places they received no salary.

He believed it to be the duty of the health officer, when the presence of a contagious disease came to his knowledge within his jurisdiction, to visit the affected premises and see that the patient is isolated, and not be satisfied by telling the people what to do.

Dr. Walcott said in Massachusetts the State Board had the authority from the quarantine, from the port of Boston down to the smallest town in the State, to interfere and take charge of an outbreak of contagious diseases where health officers are not doing their duty.

The State Board, however, had no disposition to interfere where local Boards were efficient.

Dr. Bryce found that where physicians were doing the work of health officers in the province of Ontario, without salary,

such officers did more efficient work than those that were paid for their services. Their board had the power to appoint local health officers, and they had efficient and well organized boards in the rural districts.

Dr. Lachapelle thoroughly agreed with Drs. Walcott and Bryce.

Dr. Baker said to prevent the spread of these diseases it is necessary to have knowledge of the first cases. In the cases of infected immigrants we receive information of their destination from the Supervisor of United States Immigration in New York, and the health officers residing in the localities to which they are going are notified and the immigrant is kept under observation.

The next topic taken up for discussion was the part played in the spread of tuberculosis by the flesh and milk of tuberculous cattle.

Dr Fisher, who was down on the program to open the discussion, sent the following communication and article:

PROVIDENCE, R. I., May 31, 1892.

C. O. Probst, M. D.,

Secretary State Board of Health of Ohio:

DEAR DOCTOR—Expecting great pleasure in meeting you at Lansing, I find myself at this near approach to the date of the meeting incapacitated physically for the journey. I am the victim of rheumatism and have frequent attacks, and have to dictate a considerable part of my work as at this time. I inclose some notes which I had made to assist the memory in the discussion assigned me. Pressing duties now crowding prevent me from filling in with remarks, but they may serve as points or propositions for starting a discussion.

Please excuse me at the Conference and convey to my old friends, including yourself, the assurance of my continued remembrance and warm regard.

With great regret because of my inability to be present at the Conference, I remain,

Yours very truly,

CHAS. H. FISHER.

That tuberculosis may be caused by the conveyance of the specific bacillus from an infected animal to one not so affected through the medium of meat and milk is not now a question.

That the part played by the question of milk is by far the most important as a means of spreading the disease.

That the danger of infection from the use of milk is the greatest when the udder is tuberculous; and otherwise in the direct ratio of amount of visceral and glandular invasion by the bacilli and tubercular growths; and when the recipients are in the earlier stages of life, and when later years the vital forces are enfeebled.

That the direct infection of young animals by tuberculous milk is generally, if not nearly always, first manifested in the abdominal viscera, and death not infrequently ensues before extension to the thoracic viscera is accomplished.

That it is doubtful if cows affected with tuberculosis having reached the age of five years and over without having previously shown symptoms of the disease, can be said to have derived the disease from tuberculous milk.

That much the largest number of tuberculous cows are over five years of age, and that the disease, in a majority of cases of that age and over, is largely confined to the costal pleura, the lungs and pericardium.

That not all, nor even a large proportion of the calves suckled by cows in some or any stage of tuberculosis, become tuberculous within two years; but that a large proportion of young pigs fed exclusively on milk from tuberculous cows do become tuberculous and show symptoms in from eight to ten weeks, and in some cases are badly affected in from ten to twelve weeks.

That it is probable that young children and even adults, becoming tuberculous through the medium of milk, are first affected in the abdominal viscera and that, if the increase of tuberculosis among bovine animals—which is not doubted—has caused a corresponding increase in human tuberculosis, that such increase has been most largely in disease of the abdominal viscera.

Taking the census years, 1870 and 1890, the percentage of increase of population in Rhode Island was about 40 per cent.

The proportion of increase of mortality from pulmonary consumption during the same years was about 40 per cent., the mortality from tubercular meningitis less than 40 per cent. and the mortality from abdominal tuberculosis in excess of 100 per cent.

Doubtless some allowance should be made for more correct differential diagnosis during the later years.

If, as claimed by some parties (prominent veterinarians) the tubercular microbe may be expected to be present in the milk of all tuberculous cows, and, that from five to eight per cent. of all milch cows are tuberculous, we would thereby be confronted with the appalling statement that from one-twentieth to one-twelfth of all the milk consumed by human beings may carry the seeds of death.

The immense quantities of milk consumed and the probability of a considerable proportion (not nearly reaching the estimate above) conveying tubercular bacilli into the stomach of millions of people daily, calls for some suggestions as to why the cases of tuberculosis have not been immensely larger in numbers.

Speculative theories are not few. That there are, however, agencies within the body antagonistic to the multiplication and life of the specific microphyte, is scarcely to be questioned. Whether those agencies are some of the constituents or qualities of the digestive fluids or of the blood serum or of the muscular juices or the leucocytis or other special thagocytes, newly created or increased in number, specially as a fighting police to resist the invading bacilli, or whether the bacilli are sooner or later forced to a combat with each and all of the normal defenders either to conquer finally or be destroyed, although questions of great importance and eliciting large discussions, are still "subjudice."

The question of detection of tuberculosis by tubercular or otherwise, of arrest of progress within the body by subcutaneous injection of ingestion of organic substances, of the conferring of immunity from the effects of bacillare invasion, of the means of dislodgment and removal of the bacilli and products from within the body and repair of lesions in non-immune invalid bodies, are pertinent in relation to effects of use of the tubercular milk, and may be considered if circumstances favor.

SOME OBSERVED FACTS.

In connection with the consideration of tuberculosis in cattle there are some facts that have come within the experience and observation of the Secretary that have an obvious bearing upon the question of transmissibility of tuberculosis from one animal to another, and from cows to human beings by the ingestion of milk.

Within the last twelve years there have been found from one to two cases of tuberculosis in various herds in the State without the occurrence of other cases subsequently in the same herd.

Within the same period there have also occurred, in a very few instances only, the knowledge of the infection of the entire herd, and in no herd exceeding eight in number, except at the State Farm.

In no instance has a case of tuberculosis occurred in any family ascertained by observation or inquiry, subsequently to the home use of the milk from any of the herds in which tuberculosis has been found.

In no instance has tuberculosis been found present in any family or in existence immediately preceding the occurrence of the malady in the bovine stock of the family. In no instance has there seemed to be any connection between the infection of tuberculosis cattle and the sputum of any consumptive person.

The Secretary has under observation several persons who used exclusively, for not less than a year in either case, the milk of tuberculous cows which were badly diseased, and so far, now from two to three years, no case of consumption has occurred among them.

These facts, however, do not disprove the theory of the communicability of tuberculosis, which the Secretary believes to be well established, but do show that the dangers from infection are not so inevitable as some theorists are disposed to affirm.

It may be stated also that while tuberculosis has been gradually increasing among the milch cows of the State, the proportion of deaths from consumption or tuberculosis among the human population of the State has been gradually decreasing.

The subject was further debated by Drs. Munn, Wingate and Emmert.

Adjourned to meet at 7:30 P. M.

THIRD SESSION.

The special committee, appointed at the first session, reported as follows:

Report of the committee appointed to deal with propositions regarding the pollution of streams and purification of water supplies:

To the Chairman and Committees of the Conference:

GENTLEMEN—Your committee, appointed to deal with the above matters, begs to report:

1st. That it is the opinion of your committee with regard to State action that State and provincial authorities should interfere to prevent municipalities, corporations and individuals from polluting streams which have or may become sources of public water supply.

2d. That with regard to interstate and international action, that no practicable method for securing congenial action presents itself to your committee.

3d. That it is the opinion of your committee that further consideration after practical methods for preventing pollution of rivers and streams and for the purification of water supplies is desirable.

All of which is respectfully submitted.

P. H. BRYCE,
H. P. WALCOTT,
VICTOR C. VAUGHN,
LUCIEN F. SALOMAN,
C. N. METCALF.

Dr. Cochran protested against the adoption of the report and the whole matter was referred back to the Committee with instructions to report at the next annual conference.

The next question considered was, Should State Boards of Health be charged with the administration of medical practice laws?

The discussion was opened by Dr. Baker, who maintained that State Boards of Health should not be charged with the administration of such laws.

Dr. Cochran thought that the enforcement of laws regulating the practice of medicine might be accomplished by Boards of Health even if some members of such Boards were not medical men—some State Boards being so constituted.

He had always maintained that the medical profession should have charge of the administration of laws regulating the practice, the same as the legal profession regulated the practice of the law.

In order that the medical profession should have charge of such administration it should be through an organized body, the State Medical Society, for example.

Dr. Thompson was inclined to agree with Dr. Baker, saying that State Boards of Health must not make themselves offensive to the people, consequently he was not in favor of the administration of such laws being in charge of the Boards, as it looked a great deal like sticking their noses into other people's business and it also raised the antagonism of the profession.

Dr. McCormack said the variety of methods provided by the legislation of the different States for executing their respective medical practice acts gives evidence of great diversity of professional opinion upon this important practical subject.

The most potent objection urged against imposing the duty upon the State Board of Health is that it distracts the attention of the Board from its more distinctively sanitary work. If it really does this the objection is worthy of serious consideration. It has not seemed to have that effect in Illinois, Alabama and other States which might be mentioned. Again, it has been urged that the influence of medical schools, newspapers and other supporters of the various forms of empiricism in any State operating upon the Legislature is likely at any time to threaten the very existence of the Health Board. In other words, that the proper enforcement of a practice act is likely to arouse opposition not incident to its regular sanitary work.

This phase of the question has much importance in some States, particularly in the inception of the work, but this character of opposition has usually disappeared under a judicious and successful administration of the laws.

In Kentucky the hands of the Board have been strengthened

by its work in this direction. Our efforts to suppress empiricism and to elevate the standard of medical education has not only received popular and professional support, but has seemed to increase the influence of the Board in every way. This may be due to some extent to the fact that the work has been entirely a gratuitous and obviously disinterested one.

Dr. Salmon was of the opinion that the enforcement of medical laws should be placed in the hands of the Board constituted for that purpose and that an applicant for a license to practice medicine should be examined even if he possessed a *bona fide* diploma.

Dr. Formento said State Boards of Health should not be charged with the administration of the law regulating the practice of medicine, *i. e.*, they should not be an examining and licensing board, but should see that no one practices medicine without being properly qualified, such qualification to be proved either by diploma from some recognized school or by special examination before the State Board of Examiners.

The public health should be protected; and not undermined by unqualified practitioners and quacks.

I am in favor of such a Board appointed by the Governor for a long term on the recommendation of the State Medical Society, such examinations to be upon the principal branches of medical science, but without reference to any sectarian school or special dogma or doctrine, the candidate possessing as a preliminary condition at least a fair primary school education.

The profession is getting to be over crowded. The standard should be raised by requiring rigid examinations before an impartial and disinterested board. The teaching of medicine and the examination of candidates for practice should not be in the same heads, but distinct and separate as in England.

We are trying to have our Legislature in Louisiana pass a law "regulating the practice of medicine," from which great results are expected. In this bill are embodied the main principles which I have advocated. The bill was carefully prepared by our State Medical Society. I am sorry to say that it failed to pass; it was killed on political grounds in one of the Houses.

Dr. DeVaux said, that in North Dakota, every person desiring to practice there, regardless of a diploma, is required to pass an examination before a Board of Examiners.

THE MICHIGAN PLAN FOR THE RESTRICTION AND PREVENTION OF THE DANGEROUS COMMUNICABLE DISEASES.

BY HENRY B. BAKER, M. D., SECRETARY OF THE MICHIGAN STATE BOARD OF
HEALTH, LANSING, MICHIGAN.

[Before the National Conference of State Boards of Health, at Lansing, June 6, 1892.]

In Michigan the State Board of Health has studied the vital statistics of the State, to learn what are the most important causes of death, with a view of expending most of its energies in directions of most importance. The Board has learned that the diseases which cause most deaths, arranged in the order of their importance are: Consumption, diptheria, pneumonia, typhoid fever and scarlet fever.

According to the best information which I can obtain these diseases are all communicable diseases, and all are preventable, with the knowledge now possessed by leading sanitarians. But when this Board began its work the knowledge then possessed was not sufficient for the prevention of some of these diseases, and because of the prevailing ignorance among the people, it was not practicable to deal with all the diseases concerning which the methods of prevention were known to the Board. A beginning was made on a few diseases, concerning which the Board considered that it was practicable to educate the people generally.

Small-pox was generally known to be a contagious disease, and the Board at once labored assiduously to educate the people into a knowledge of its prevention by vaccination, and its re-vaccination, and its restriction by isolation and disinfection. The result of that work by the Board has been investigated. Comparing the death rate in Michigan from small-pox, before and since the State Board of Health was established, it was found that if the death rate had remained as it was before the Board was established, more than one thousand five hundred (1,500) persons would have died of small-pox more than have died of that disease. This was true at the close of the year 1887; and since that time the saving of life has been even more apparent.

Scarlet fever was one of the first diseases which the Michigan State Board of Health endeavored to restrict. The Board issued pamphlets, giving plain directions how to restrict scarlet fever.

These pamphlets were for general distribution, but the most important method adopted by the Michigan State Board of Health, for the education of the people of the State is the method for the distribution of the pamphlets, leaflets and diagrams relating to the restriction and prevention of the several dangerous communicable diseases.

The method is as follows: The law requires householders and physicians to report to either the President, Clerk or health officer of the local Board of Health, every case of a disease dangerous to the public health. The law requires the health officer to report to the Secretary of the State Board of Health, and to keep him constantly informed relative to every outbreak of such disease. In addition to this official source of information the local columns of newspapers published throughout the State are scanned at the office of the State Board of Health for mention of diseases dangerous to the public health; this supplies information concerning those parts of the State in which the health laws are not well obeyed. As soon as information is received by the Secretary of the State Board of Health of the occurrence of a case of dangerous communicable disease in any township, city or village in Michigan, action is at once taken; record is made in a book relating to that particular disease, directions are sent to the health officer as to the restriction of the disease, and as to his reports to the State Board; and pamphlets issued by the State Board, giving instructions for the restriction of the disease reported, are sent to him, with the request that the pamphlets be distributed to the neighbors of the family in which the disease is. It is found that such times as a dangerous communicable disease is actually in the neighborhood people will read and pay attention to brief pamphlets issued by authority of the State.

Self-interest tends to make such people believers in the statements then and thus presented to them. This method is now and for many years has been constantly acted upon, until now the citizens of nearly every township, city and village in Michigan have had an opportunity for such instructions at a time of

more or less danger from each of the most dangerous communicable diseases which the State Board has thus dealt with, namely small-pox, diphtheria, scarlet fever and typhoid fever.

One result has been the lessening of the ravages of each of these diseases. This is proved by the statistics of deaths collected by the Secretary of State; it is proved also by the statistics of sickness collected and applied by the State Board of Health. (I will refer to this subject again later.)

Another result has been a gradual increasing confidence in the State Board of Health, which promises much of its usefulness in connection with other dangerous diseases, one of which (consumption) is of more consequence than any which has been dealt with.

Probably the most important result, however, is the enlightened public sentiment of the people of Michigan with reference to those dangerous diseases concerning which the State Board of Health has thus been so constantly educating the people. That public sentiment now, in very many localities in Michigan, will sustain and uphold a health officer in effective sanitary measures which without that public sentiment could not be entered upon with any prospect of success.

There can be no doubt on this subject; we have the positive evidence of it in many places where the plans of the State Board of Health have been adopted; and we have positive evidence of the absence of such public sentiment in localities where the plans of the State Board of Health have been rejected. Thus, the city of Detroit contains about one-tenth of the inhabitants of Michigan, and, although the Board of Health in Detroit was created through the influence of the State Board of Health, its health officers have always antagonized the efforts of the State Board; and the very important plan of the State Board for the gradual building up of public sentiment relative to the restriction of the dangerous communicable diseases has been rejected by the Detroit health authorities. They distribute a pamphlet, but it does not carry with it the authority of the State Board of Health and it is given to the family in which the disease is, but it is not systematically distributed to the neighbors of the family. The result is that those dangerous communicable diseases which are of most consequence are not much restricted in Detroit; and it is claimed

by the health officer that it is not possible to restrict them because public sentiment will not sustain the measures which should be enforced by the local health officer; and the people generally will not so coöperate as to make it possible to restrict scarlet fever, and especially not diphtheria, concerning which the people have not been educated to a knowledge of its being strictly a communicable disease. The health officer estimates that it would cost nearly a million of dollars annually to restrict those two diseases in accordance with the plan of the State Board of Health, as set forth in its published pamphlets and documents. If his estimate is correct it indicates something of the value of the systematic work on the plan of the State Board of Health, and of the cost of the rejection of that plan; because if that work had been done in Detroit, as it has been done in some other parts of the State, nearly the entire million of dollars annually could be saved and also most of the sickness and very many deaths could be prevented; because the citizens of Detroit are not very different from the citizens of other parts of Michigan, and do not contain so large a proportion of ignorant foreigners as do some other parts of the State in which success has been reached by the plan of the State Board of Health, which includes the publishing of the several pamphlets issued by the Board, not only in the English language but also in different foreign languages, and the distribution of the information relative to each disease at the time the disease is actually present in the neighborhood.

Not every other place besides Detroit has adopted the plans of the State Board of Health, yet enough have done so to bring down the death rate from diphtheria and scarlet fever below those in Detroit.

This is especially so relative to diphtheria. For the year 1890 the reported deaths from scarlet fever, in Detroit, were 2 per 10,000 inhabitants, while outside of Detroit the deaths in the State were 1.6 per 10,000 inhabitants, excluding the inhabitants of those localities in which scarlet fever did not occur, or, at least, was not reported. For the same year the reported deaths from diphtheria, in Detroit, were 17 per 10,000 inhabitants, while outside of Detroit they were only 9.3 per 10,000 inhabitants, counting only the inhabitants of localities in which diphtheria actually occurred and was reported.

If the inhabitants of the whole State were counted in, the

difference between the death rate in Detroit and in the rest of the State Board would be very much greater than is here shown.

Of the great usefulness of the plans of the State Board of Health, for the restriction of the dangerous diseases, we have abundant proof, and some of the evidence is of the nature of mathematical demonstrations.

Thus, a study of the vital statistics of Michigan proves that, comparing the death rate throughout the State as a whole, from scarlet fever, before the State Board of Health was established with the rate since its establishment up to the close of the year 1887, over five thousand six hundred persons had lived who, under the old mortality rate, would have died of scarlet fever. This is an average saving of four hundred lives per year from that one disease, scarlet fever.

A similar comparison of the death rates throughout the entire State, of typhoid fever, before and since the State Board has been dealing with that disease, proves that during the first period (1869-78), the rate was 37.71 per 100,000 inhabitants, while during the latter period it was only 30.87 per 100,000; a saving of 6.84 lives per 100,000 inhabitants per year, or 1,359 lives during the eleven years since this work was begun. It is very apparent that the saving of life, and the still greater prevention of sickness, is not only greater in the latest years, when the numbers of inhabitants are greater, but such education of the people as has been started by the State Board of Health, when it has once been fairly inaugurated, tends constantly to spread, so that the influence already exerted by the State Board will continue through all coming time to have their beneficial effects.

The doctor's paper was discussed by Drs. Avery and Munn.

The following was received from Dr. Homan, of the State Board of Health of Missouri, and presented to the conference by Dr. Baker:

WHEREAS, The importance of the speedy destruction of the dangerous or infective matters given off from the bodies of persons sick with communicable diseases can not be too frequently or strongly impressed on the public mind; and,

WHEREAS, Practical experience and scientific experiment have alike proven conclusively the high degree of efficiency

possessed by superheated steam or steam under pressure properly applied to speedily accomplished such destruction; therefore, be it

Resolved, That it is the sense of this conference in the interest of public health that the duty and necessity of providing proper means for steam disinfection should be brought by the several State and Provincial Boards to the attention and impressed on the minds of all municipal and local Boards of Health as affording in the long run the cheapest, readiest and most efficient practical method of securing the destruction of the germs and spores of diseases dangerous to animals and man occurring or harbored in woolen garments, blankets, domestic furnishings, etc., the pecuniary value of which forbids their destruction by fire.

In support of the foregoing resolution Dr. Homan offered the following remarks:

Without presuming to speak with full knowledge as to the extent to which steam is used in this country and Canada for the purpose named in the resolution, still it is my belief that with perhaps few exceptions such use is restricted to quarantine disinfecting stations at our principal seaports, at which places the powers of the agent named to accomplish disinfection in the scientific meaning of the term is susceptible of almost daily demonstration. And it has, perhaps, been on account of the considerable item of expense involved in the complete equipment of such stations that the general impression prevails, in the interior of our country, at least, that such a service to be effective must needs be costly.

It is for the purpose of not only advocating its employment and efficiency, but to endeavor to dispel this impression, that I have brought the matter to the notice of the conference with the hope that in so doing a closer study will be made of the ways and means by which the general employment of steam disinfection may be brought about and its use extended even to small communities.

Aside from its well-known power as a germ and spore destroyer, a consideration that should weigh in favor of live steam with practical sanitarians, is the fact that no loss or damage in fibre, texture or color attends its proper use, and this is a matter of no small moment in dealing with the woolen clothing, blankets, bedding, etc., of poor people, these articles

all being liable to injury or destruction by the use of chemical disinfectants, or heat otherwise applied. And apart from the failure of chemicals oftentimes to accomplish true disinfection, which tends to weaken popular confidence in the process, there is a popular prejudice against them arising from the damage done to personal apparel and household goods through their employment as complete or partial disinfectants.

In cities where constant necessity for real disinfection exists, separate establishments could be provided with all requisite facilities complete, or if the finances failed in this respect, steam-tight chambers should be provided at public cost and the use of the necessary steam hired from some near by establishment. In small places wherever a steam grist or saw mill or other establishment so operated existed, the means for the true disinfection would be at hand; or, indeed, the portable generator used in connection with steam threshing machines could equally well be used, and at small expense.

As tending to show the present status of medical opinion in Missouri on the subject matter of the resolution, I may be permitted to say that the Medical Association of the State, at its meeting last month, unanimously passed a resolution favoring the use of steam as a disinfecting agent, and commending it to the favorable notice of health authorities throughout the State; that the two most influential societies in St. Louis have taken similar action, while the Board of Health of that city is now considering the matter and will probably ask for the money to bring it into speedy practical use.

It is also likely that the State Board will declare in favor of it at the next meeting, and recommend its employment wherever possible and expedient.

In conclusion, I beg to hope that the considerations thus set forth may meet your views, and lead to favorable action on the subject presented.

The resolution was referred to the following special committee with instructions to report to the Conference at its next annual meeting :

Dr. Geo. Homan, Dr. P. H. Bryce, Dr. Henry Baker.

FOURTH SESSION.

MISCELLANEOUS BUSINESS.

The Treasurer, Dr. Baker, made his report, which was received and ordered printed in the transactions of the Conference.

On motion, an assessment of ten dollars (\$10) was made on each State Board of Health that is a member of the Conference.

In the absence of Drs. Bryce and Lindsley (Tenn.), who were to lead in the discussion of "The Practical Working on Interstate Notification," it was decided, on the motion of Dr. Baker, that hereafter when small-pox and other dangerous diseases requiring interstate notification that such notices be sent to the other States at least weekly, and oftener if necessary.

The next topic considered, "Is the Disinfection of Baggage Essential to Effective Quarantine?" The Conference answered this question by a unanimous vote in the affirmative.

The following Committee to formulate a plan for the creation and organization of County and other Local Boards of Health, was continued:

DR. HENRY B. BAKER, Michigan.

DR. C. A. LINDSLEY, Connecticut.

DR. BENJAMINE LEE, Pennsylvania.

The Committee appointed to make a codification of the Health Laws of the different States and Provinces was discharged.

The following Committee on "Collective Investigation of Diseases" was continued:

DR. C. H. FISHER, Rhode Island.

DR. S. W. ABBOTT, Massachusetts.

DR. BENJAMINE LEE, Pennsylvania.

Dr. Henry B. Baker, the Committee on Vital Statistics, made a report, and Committee continued.

The Committee on the Prevention of Consumption made the following report, and was continued:

REPORT OF PROGRESS OF THE COMMITTEE ON THE PREVENTION OF
TUBERCULOSIS.

GENTLEMEN—Your committee has the honor to present its report of progress on the problem of how to prevent the spread of Tuberculosis.

While there have been abundant indications of the progress of public sentiment in the direction which was indicated in the report adopted as a partial report last year, yet it can not be said that any positive advances have been announced, as had been the year before, when the discovery of the assumed value of tuberculin had been made.

The failure of this discovery in producing those curative results, which some medical men are continually seeking "in some new thing," has probably caused both physicians and the public to turn again toward those preventive measures of hygiene, sanitation and climate which this Conference has set forth as marking the true line of progress in lessening the prevalence of this fatal disease.

The report brought in by the committee last year, and the conditions therein set forth, are such as your committee still believe to be practical and abreast of modern scientific opinion on the subject.

In the experimental field, most of the work done has been on the uses of tuberculin in the diagnosis of tuberculosis in cattle.

The following summary of work done is fairly satisfactory; but, as Nocard has said, the value of tuberculin "requires the baptism of time in order that a true estimate of it may be arrived at."

The results obtained by the use of tuberculin in diagnosis of tuberculosis in cattle have been somewhat uncertain; some observers, Nocard, for instance, consider the results sufficiently unsatisfactory to exclude the use of it at present. Others are more sanguine, and would advocate its use in all cases where a doubt exists.

In some cases where the typical reaction obtained after the injection of tuberculin and yet at the autopsy the results appeared negative, a closer examination of the tissues showed that the disease was in the incipient stage, in one case, for instance, meningeal.

Perhaps the latest researches published in this line are those which appeared in the last number of the *Arbeiter* of the Imperial Health Officer at Berlin. These were carried on under the direct supervision of the Imperial Health Office at Berlin, Carlsruhe and Mannheim, and the results are as follows:

At Berlin (64 animals) 82.4 per cent. of the animals which reacted proved to be tubercular, whilst 69.2 per cent. of those which did not react were not tubercular.

In Carlsruhe and Mannheim (69 animals) the results were better, 86.2 per cent. of those which reacted were tubercular and 97.5 per cent. of those which did not react were not tubercular.

The injection apparently was particularly efficacious in those cases in which doubt existed or in which, indeed, no external symptoms lead to suspicion of tuberculosis.

Your committee would respectfully suggest a continuance of a committee on this important subject.

The erection of hospitals for the treatment of the disease and isolation of patients has proved on the whole the direction in which medical progress and social philanthropy tends to move; and from the preventive standpoint your committee would most strongly recommend that the Conference encourage such work by all the means within its power.

All of which is respectfully submitted.

P. H. BRYCE,
VICTOR C. VAUGHN,
LUCIEN F. SALOMON,
Committee.

The report of the "Committee on the Pollution of Streams, and the Formation of Rivers Conservancy Commissions" will be found in another part of the proceedings.

The committee was continued.

The following officers were elected:

Dr. J. N. McCormack, President.

Dr. C. O. Probst, Secretary.

Dr. Henry B. Baker, Treasurer.

Conference adjourned.

RULES AND REGULATIONS
FOR THE GOVERNMENT OF
TOWN, CITY AND COUNTY BOARDS OF HEALTH,
ADOPTED BY THE
INDIANA STATE BOARD OF HEALTH.

JANUARY 28, 1892.

SCHOOLS.

RULE 1. No person affected with any contagious or infectious disease shall be admitted into any public or private school.

RULE 2. No person shall be admitted into any public or private school, from any house or building infected with any contagious or infectious disease, or who may recently have been afflicted with small-pox, scarlet fever, cholera, whooping cough, diphtheria, membranous croup, measles or other contagious or infectious disease, until first presenting a certificate signed by a reputable physician that all danger of communicating such disease to others is passed, and said certificate is indorsed by the health officer in whose jurisdiction the person may reside.

RULE 3. Town, City and County Boards of Health, shall exercise especial supervision over the location, drainage, water supply, heating, ventilation, plumbing and disposal of excreta, of the schools and school-houses within their respective jurisdictions, and where any hygienic faults are found it shall be their duty, upon complaint of said health officers, to notify, immediately, the proper authorities and cause the same to be corrected.

DISEASES DANGEROUS TO THE PUBLIC HEALTH.

RULE 4. Whenever any householder shall know or suspect that any person within his or her family, or who may be temporarily residing with him or her, is sick with small-pox, scarlet fever, diphtheria, cholera, or any other disease dangerous to the public health, he shall immediately give notice to the health officer within whose jurisdiction he may reside.

RULE 5. Whenever any physician shall know or suspect that any person whom he is called to visit has small-pox, scarlet fever, measles, diphtheria, cholera, or any other disease dangerous to the public health, such physician shall give notice, immediately, together with the locality and full description of the case, to the local Board of Health within whose jurisdiction the disease or diseases may occur.

RULE 6. No parent, guardian, or other person having charge or control of any child or children, shall allow or permit any such child or children to go from any house or building infected with small-pox, scarlet fever, diphtheria, measles, whooping cough, cholera or other contagious or infectious diseases, to attend any church or public meeting, or place of amusement, or to travel in any street car, or in any public vehicle, or to appear on any public street or highway.

RULE 7. No person shall be permitted to go from any house or building infected with scarlet fever, diphtheria, measles, cholera, or other contagious or infectious diseases, dangerous to the public health, to attend any church, public meeting, or place of amusement, or travel in any street car, or public vehicle, or to appear on any public street or highway, without making a complete change of clothing, and then he must have a permit from the local Board of Health.

RULE 8. No person who is or has been affected with any contagious or infectious disease dangerous to the public health, shall be permitted to appear upon the public streets or highways, or in any public place, or public conveyance, until a certificate is made by the attending physician to the local health officer in whose jurisdiction the case occurs that all danger from contagion by reason of such disease is passed, and such certificate is indorsed by the said health officer.

RULE 9. In case of the alleged presence of any contagious or infectious disease dangerous to the public health, where the

health officer is not satisfied of the existence of such, it shall be his duty to visit and examine in the presence of the attending physician, such case or cases of contagious or infectious diseases and act according to rules governing his office.

SMALL-POX.

RULE 10. No person will be allowed to leave any house, building or premises infected with small-pox, unless he has heretofore had the disease, and then he must make a complete change of clothing and have a permit and instructions from the local health officer.

RULE 11. In all cases where an exposure to small-pox is threatened, it shall be the duty of the Board of Health within whose jurisdiction such exposure shall have occurred, or danger of such an epidemic ensuing, to compel a vaccination, or revaccination of all exposed persons. All vaccinations must be made with non-humanized virus. The only exception to this rule that is recognized by this Board is in the event that small-pox is prevalent in epidemic form and the health officer should certify to the impossibility of obtaining such virus in sufficient quantity and also as to the purity of the humanized virus to be used in lieu of the bovine virus.

CARDS AND FLAGS.

RULE 12. Upon notice being given of cases of small-pox, scarlet fever, diphtheria, measles, cholera, or any other contagious or infectious disease, the county health officer shall cause the attending physician, when such cases are outside the corporate limits of any town or city, where there is no organized Board of Health, to see that the proper cards or flags of warning, not less than twelve inches square, are fastened to the front door, or other conspicuous place of the building where such sickness prevails; and when the above named diseases occur within the limits of any town or city which has an organized Board of Health, it shall be the duty of the local health officer to cause the said cards or flags of warning to be properly placed.

The card or flag for small-pox shall be red, and shall have

printed thereon small-pox ; for scarlet fever, measles and diphtheria, it shall be yellow, and have scarlet fever, measles or diphtheria printed thereon in large letters ; for cholera a black card or flag with cholera printed thereon in white letters, shall be used.

No person shall remove or cause to be removed any such card or flag, until a certificate is made by the attending physician to the health officer in authority, that the disease has subsided and all danger from contagion by reason of such disease is passed, and that proper disinfection has been accomplished. (See rule 14.)

Any person causing the removal of said cards or flags, before the said physician's certificate is placed in the possession of the Board of Health in authority, or without the consent of its executive officer before such certificate has been issued, shall be subject to the penalty as provided by section nine of an act passed February 19, 1891. (Copies of these rules and regulations, and the necessary cards and flags, will be furnished on application to the proper health officer.)

BURIAL.

RULE 13. It is made the duty of every person who may have charge of any one who has died of small-pox to cause the body of any such person to be interred within twelve hours after death.

Whenever any person has died from small-pox, scarlet fever, diphtheria or cholera, the body must be placed in a coffin as soon as possible and the coffin securely closed, and never again opened. In all cases of death from any of the above-named diseases the funeral of any such person must be strictly private.

DISINFECTION.

RULE 14. The room in which there has been a case of contagious or infectious disease, dangerous to the public health, must be disinfected immediately in accordance with methods prescribed in preventable disease circular, pages 6 and 7, the work to be done under the supervision of the health officer.

MARRIAGE, BIRTH AND DEATH REPORTS.

RULE 15. City and town health officers shall record all returns of births, deaths and contagious and infectious diseases, and they shall monthly turn over to the county health officer the original birth, death and contagious and infectious disease returns.

RULE 16. All physicians, accoucheurs and midwives in this State are hereby required to report to the Secretary of the Board of Health of the town, city or county in which they may occur, within five days thereafter all births and deaths which may occur in their practice. Whenever a physician's supply of the necessary blanks on which to make returns of births, deaths and contagious and infectious diseases is exhausted, he shall at once make a requisition for the same on the health officer within whose jurisdiction he may reside, and said health officer is hereby required to immediately supply the demand.

RULE 17. It is hereby ordered that each county health officer in this State shall, on or before the thirtieth day of the month following the close of each quarter, make his quarterly returns of all marriages, births, deaths and contagious and infectious diseases reported to him, to the Secretary of this Board, on blanks prescribed and furnished by the State Board of Health.

RULE 18. Whenever any death or birth occurs with no physician, accoucheur or midwife in attendance, then such death or birth shall be reported to the town, city or county health officer by the householder under whose observation such death or birth may occur. Such reports to be made within five days after their occurrence.

In all cases of death when a coroner has held an inquest, and the death has not been certified to by a physician, then the said coroner is required to make such report to the proper authorities within five days after holding the inquest.

RULE 19. All persons authorized in this State to solemnize marriages are hereby required to make reports of all marriages solemnized by them to the Clerk of the Circuit Court, by whom the marriage license is issued, on blanks furnished by such Clerk, within five days after the marriage is solemnized.

RULE 20. It shall be the duty of county health officers to see that at all times physicians are supplied with the necessary

blanks for the reports of births, deaths and contagious and infectious diseases. (Such blanks will be furnished county health officers by this Board on application.)

RULE 21. Secretaries of County Boards of Health are hereby directed, and it is made their duty, to cause all physicians in their respective counties to report to them all births, deaths and contagious and infectious diseases occurring in their practice on such blanks as are furnished by the State Board of Health.

APPEALS.

RULE 22. In case of any acts on the part of any local health officer not authorized by the laws and rules governing the State Board of Health, appeal may be had to said Board in session, or its executive officer, but pending such appeal the action of said local health officer shall hold good.

SANITARY INSPECTIONS.

RULE 23. All town, city and county Boards of Health shall cause to be made at least once each year and report the result of their investigations to this Board, a thorough sanitary survey of their respective jurisdictions for the purpose of ascertaining the existence of conditions detrimental to the public health, including in such survey stagnant ponds, imperfect drainage, sewerage, cess-pools and water-closets; the construction, heating, ventilation, plumbing and disposal of excreta of all public buildings, prisons, hospitals, eleemosynary institutions, and such nuisances as might prove dangerous to the public health. Whenever any hygienic imperfections are discovered they shall at once take proper action, as prescribed by law, to have the same corrected.

LOCATION OF CEMETERIES.

RULE 24. It is hereby ordered that no cemetery shall hereafter be located within less than one mile of the corporate limits of any town or city in this State.

PENALTIES.

RULE 25. Any person or persons failing or refusing to comply with these rules shall be subject to the penalties provided in section 9 of an act establishing a State Board of Health, passed February 19, 1891.

ADDITIONAL RULES GOVERNING THE TRANSPORTATION OF DEAD BODIES.

RULE 9. During a prevalence of diphtheria permit of shipment shall not be granted in the case of any one dying of membranous croup.

RULE 10. Permit of shipment shall not be granted upon the certificate of "heart failure" alone, but in every case the cause of "heart failure" must be stated.

JOHN N. TAYLOR, M. D.,
President.

C. N. METCALF, M. D.,
Secretary.

ASIATIC CHOLERA IN EUROPE AND AMERICA.

In view of the extensive and steady spread of cholera in the Russian empire, and of the great uneasiness manifested both in Europe and America as to its becoming, as in former times, a pan-epidemic, we give memoranda connected with its past history. By observation or by tradition all our people are more or less familiar with it.

One broad fact appear in lucid brightness. The mystery that once enveloped the plague no longer exists. It need not get into the Union.

If from culpable oversight, carelessness or penuriousness it does get over the lines, it need not spread. Isolation, sanitation, disinfection, humane care are the safeguards. Money will secure all these.

The public can well afford to furnish all that is wanted for this purpose, since the return is truly a hundred fold.

1629—Bontius, a Dutch physician at Batavia, described the disease and first made it known to the medical profession in Europe.

1817—It raged with great violence at Jessore, from whence it spread, not very swiftly, but with great certainty, in all directions.

1818—By August it had reached Bombay. Thence it traveled through Arabia, Persia, Mesopotamia, Syria, etc., on its westward course, and, continuing to extend itself eastwardly from its place of origin, invaded the Burmese empire, Siam, Java, China, and other populous countries of that portion of the earth.

1823—It appeared at Orenburg and Astrachan, on the eastern frontier of Russia.

1828—Remained here until this year, when it increased in violence, attacking a tenth of the inhabitants of the Province of Orenburg, proving fatal to a fourth of those affected.

1830—Reappeared at Astrachan. In less than a month 4,000 persons died of it in that city, and over 21,000 in the province.

1831, June 26—Appeared at St. Petersburg, having ascended the Volga and destroyed thousands in Moscow. From Astrachan it also diverged along the northern coast of the Black Sea, and thence spread into Austria, Poland, Prussia and Northern Germany.

1831—In August it was conveyed to Cario by a caravan from Mecca. Over 15,000 died of it.

1831, October 26—It appeared for the first time in England at Sunderland, from whence it spread slowly through the northern part of England and into Scotland.

1832, February 14—It broke out in London.

1832, June 8—The cholera broke out at Quebec, its first appearance in America. Two days afterward it was in Montreal.

1832, June 24—New York was attacked. From thence it spread to Albany, Philadelphia, Cincinnati, New Orleans, etc. In New York it reached its height on the 21st of July.

1836—It lingered in the United States for four years, and then entirely ceased. This first epidemic of cholera cost Great Britain and Ireland 40,000 lives out of 116,000 persons attacked. In the cities of Quebec, Montreal, New York and Philadelphia, embracing then about 450,000 inhabitants, there were over 18,000 cases and 8,000 deaths. In India it remained endemic. Other Asiatic countries also suffered severely.

1846—It appeared at Kurrachee early this year near the mouth of the Indus with terrific violence. Thence to Teheran,

capitol of Persia. Here its severity was such that 300 perished daily for several weeks in a population of not more than 60,000.

1847 and 1848—Cholera ravaged parts of Russia and Turkey, having entered Europe by almost the identical route as before. It traveled, however, with much greater rapidity.

1848—In the autumn it appeared in France and Great Britain, revisiting during the next eight months with almost unerring certainty every place in which it had appeared in 1832-33, and seeking out the same filthy lanes and undrained sections of the cities where it had then committed its greatest ravages. It was even more malignant than in its previous visit. In England and Wales it carried off 53,298 persons.

1848, December 4—The ship of New York, from Havre, arrived at Staten Island with cholera among her passengers.

1849—It occurred in New York. The whole number of cases reported outside the hospitals in fifty-two days were 2,631, of which 915 died. Also in New Orleans, and spread over the greater part of the Eastern and Western States.

1850—In New Orleans, deaths from cholera, May to December, inclusive, 824. Cases occurred as late as February 15, 1851.

1850—At Cincinnati, from June 1 to August 15, 1,400 deaths from cholera. At Columbus, Ohio, from the 24th of July to August 25, 195 deaths from cholera—a great mortality for the population.

1851—A second visitation at Cincinnati. Some 200 deaths, mainly in July.

1851—From April to August, inclusive, 766 deaths from cholera in St. Louis. Total for the year, 847.

1852, May, June and July—Numerous cases in Cincinnati.

1852—Total deaths in St. Louis for the year, 789, of which 508 in June and July.

1854—Cholera as virulent in St. Louis as it was in 1849. Total deaths, 1,534, mainly in May, June, July and August.

1855—Disappeared from the United States.

1853, 1854—Prevailed in Great Britain.

1855, 1856—The allied armies in the Crimea suffered intensely.

1865, 1874—Cholera persisted in Europe about ten years.

1865—In the beginning of May it broke out with terrible fury among the pilgrims at Mecca. On the 10th or 11th of May the first death occurred at Alexandria. In June it had

reached Cario. On the 3d of July at Constantinople, where it produced a terrible panic.

From Alexandria a steamer conveyed it to Marseilles. From thence travelers carried it to Paris.

1865, September—Several cases at Southampton, England. Did not spread.

1865, November 3—Steamship Atlanta came into the lower bay of New York, with 400 German immigrants and cholera. Precautions taken. No spread.

1865, July 7—At Ancona in Italy, from Alexandria.

1865—Great epidemic at Valencia in Spain. Thirty-one out of forty-nine provinces in Spain were ravaged from July till the close of the year. It extended also into Portugal.

1866—Cholera was early reproduced in almost all the localities it had visited in 1865. It extended northward as far as St. Petersburg. It appeared in several localities in Bavaria, Saxony and Prussia, also in Belgium and Holland. It still existed in Paris and extended to the northwest of France.

1866—An epidemic in Liverpool from July 22 to the end of November carried off 1,792 victims. In London for the four weeks ending August the 4th the deaths were 63,481, 1,097, 1,178. More or less diffused over England during the summer.

1866—It broke out in New York about the beginning of May, and gradually spread over the country, following the lines of travel.

Prevailed extensively in the United States army, causing over 1,200 deaths among officers and men. During summer and fall prevailed extensively at New Orleans. Prevailed at St. Louis also.

1867—A general abatement in Europe. Prevalent in South America. Buenos Ayres suffered greatly.

1867—At New Orleans, reappeared in June. 571 deaths the following six months. Again at St. Louis during summer and fall.

1868—Completely died out in Europe.

1869—By its old route it reached Nijni Novgorod and broke out in September.

1870—A vast outburst of cholera. In Russia, 9,386 deaths.

1871—In Russia, 124,884 deaths.

1872—In Russia, 113,196 deaths.

1873—In Russia, 4,895 deaths.

1872—Very widely diffused over Europe. Imported into England on several occasions. Its spread stopped by the local sanitary authorities.

1873—Began to subside in Europe.

1872, December, and 1873, January—There arrived at New Orleans a total of nearly two thousand immigrants from cholera infected districts of Europe.

1873, February 9—First death at New Orleans. Two hundred and fifty-nine fatal cases occurred during the epidemic.

1873, April 8—First case, fatal, at Vicksburg.

1873, June 30—First case, fatal, at Little Rock. Four importations; no spread, owing to the energy and efficiency of the medical men in whose care the initial cases occurred.

1873, April 15—First case, fatal, at Memphis.

1873, May 24—First case, fatal, at Chicago. Total number of deaths from cholera and cholera-morbus, May and September, 116. Many towns and villages suffered greatly.

1873—First case at St. Louis, died 11th of May. A mild epidemic followed. Other localities visited.

1873—First case at Paducah, died May 21. Very widely diffused throughout Kentucky.

1873, June 15—First death reported at Cincinnati. Two hundred and seven deaths during the summer. Other cities and towns in Ohio visited.

1873, June 6—First death at Evansville. Other localities in Indiana visited.

1873—During June and July sixty-two deaths at Huntsville, Ala.

Birmingham, with about three thousand inhabitants, was terribly scourged during June and July.

1873, June 15—First case, fatal, at Wheeling.

1873—But two authenticated cases of cholera occurred in the State of Georgia. Both were residents of and refugees from Chattanooga.

One died at Atlanta, population 22,000, on July 2. The other at Dalton, population 5,000, on July 3. Both instances terminated fatally in communities in which the auxiliaries to the rapid development of a cholera epidemic were present, the specific causes having once been imported; yet in both instances, by the prompt and energetic action of the medical men having the cases in charge, the power of the disease was

confined to the infected individual, and the health of the residents of the respective houses and of each community were efficiently guarded.

During this year some two hundred cities and towns in the Mississippi Valley were more or less afflicted.

1882—Made its appearance in Egypt, where in three or four months it occasioned a mortality of 30,000 to 50,000 of the inhabitants.

1884—On June 13th or 14th it invaded the French Military post, Toulon. Then the cities of Toulon and Marseilles, and spread through the south and southeast of France, and partly in central and western France.

1885—At Marseilles and in Bretagne.

1884—About August, in Spain.

1885—Invaded almost the whole of Spain.

1884—Brought into Italy.

1885—Great ravages at Palermo, Sicily.

1885-6—At Venice.

1886—From April during the rest of the year it ravaged the peninsula of Italy.

1886—At Trieste, and also the Austro-Hungarian shores of the Adriatic.

1887—Again in Sicily and Italy.

1884-1887—The epidemic of cholera in Europe cost France 15,000 inhabitants in 1884, 1885 and 1886; Spain, 180,000 inhabitants in 1884 and 1885; Austro-Hungary, 4,000 inhabitants in 1886; Italy, about 50,000 inhabitants in 1884, 1885, 1886 and 1887; Malta, 500 inhabitants in 1887; a sum approximately of 250,000 inhabitants of Europe. In other words the epidemic has removed from France about one inhabitant for every 3,000, from Italy one inhabitant for 550 or 600, from Spain one inhabitant for every 100, from Austro-Hungary one inhabitant for every 9,000. An approximate calculation of these losses, estimated from the purely material point of view, shows a sum total of about \$80,000,000 of value destroyed. A still greater loss resulting from the damages caused by the disease through idleness, interference with commerce and navigation, interruption of business, etc., would increase the sum total of the losses occasioned by the cholera to about \$200,000,000 in three or four years.

1886—Cholera introduced into Buenos Ayres, Argentine Republic, in November, by the ship *Perseo*, plying between that city and Genoa.

A conspicuous example of official pride and stupidity. An extensive epidemic developed and the disease spread through the inland provinces. The city was cut out entirely from the commercial world. Uruguay, Brazil, Paraguay, and most of the European ports quarantined against it.

1887, January 19—Cholera officially declared at Montevideo, Argentine Republic, after many denials of its existence.

1887, January 2—Cholera at San Felipe, a town situated near the base of the Andes, 40 miles north of Santiago. The latter city severely scourged. Commerce of Chili interrupted with heavy losses.

1887, September 23.—The steamship *Alesia* arrived at New York from Marseilles with cholera on Board. At Naples some 600 immigrants, from the cholera districts of Italy and Sicily, were taken aboard.

Proper precautions used by the quarantine officials and the disease not allowed to spread. Much credit claimed, and justly, considering their limited means.

There are three factors essential to the prevalence of cholera in the country as an epidemic: (1) The importation of the disease by means of ships, more or less directly from its only place of origin in India. (2) Local unsanitary conditions favorable to the reception and development of the disease. (3) Persons sick of the disease in some of its stages, or things infected by such sick persons to carry it from place to place.

These three factors naturally suggest the methods for combatting the disease for which there is needed practical work, international, national, interstate, state and local.

The disease having already made its appearance in this country, the Board issued and distributed to the several Boards of Health in the State, the following order:

STATE BOARD OF HEALTH.

INDIANAPOLIS, September 3, 1892.

To Health Officers:

In view of the rapid spread of Asiatic Cholera in Europe within the last sixty days this Board feels that there is great danger that it will invade our country and comprehending the destruction of human life that would ensue recognize the necessity of placing the State in such a sanitary condition that if it comes it will find no soil in our borders to propagate its germs. It is therefore ordered that all Boards of Health observe the following:

1. Make a thorough sanitary inspection of their respective jurisdictions.

2. See that all accumulations of filth, decaying animal and vegetable matter on roads, streets, alleys, door yards and vacant lots are removed.

3. That all gutters and drains are kept open and clean and that they are frequently flushed and disinfected wherever practical.

4. That all privy vaults, sinks, cesspools, foul cisterns, stagnant ponds, hog pens, foul stables, unwholesome cellars, manure piles, dirty yards or lots, foul sewers and all other places suspected of being injurious to the public health are thoroughly cleaned, disinfected and purified.

5. That all rank vegetation along streets, sidewalks and gutters of cities and towns is cut and destroyed and not left to rot.

6. Attention is called to the importance of compelling the proprietors of steamboats and those in control of railway property, owners of hotels and boarding houses, school officials, Sheriffs, City Councils, Town Trustees and others in control of property to thoroughly clean and disinfect their premises and prepare suitable water-closets for their patrons, tenants and scholars and frequently disinfect them.

7. Attention is called to the necessity of making frequent inspections of all vegetables and other articles of food offered for sale. Tainted vegetables and fruits are frequently sources of disease.

8. The carcass of any dead animal or the offal from slaughter houses, putrid animal substances or the contents of privy vaults must not be placed upon public grounds, market place, common, field, lot, road, street or alley, or into any river, stream or lake.

There should be thorough whitewashing, drying, ventilation and disinfecting of all parts of habitations by the citizens of the State. The water supply should receive special attention and be carefully protected from pollution by seepage from foul places and surface washings. Water being the readiest medium through which cholera and typhoid fever spread, the absolute necessity of sacredly protecting it from contamination is apparent.

You are directed to promulgate and enforce the foregoing and to prosecute any one who may resist the execution of your orders.

By order of the Board,

C. N. METCALF, M. D.,

JOHN N. TAYLOR, M. D.,

President.

Secretary.

STATE BOARD OF HEALTH.

INDIANAPOLIS, September 17, 1892.

WHEREAS, Information has come to this Board that cholera has made its appearance upon our seaboard; and

WHEREAS, There is great danger that it will spread to the interior; therefore, be it

Resolved, By the State Board of Health, in special session, that the various city and county Boards of Health whose territory may be threatened are hereby directed to take all necessary steps to prevent the invasion of cholera. To this end they shall provide for the inspection of all trains or other public conveyances entering their respective jurisdiction. In case it appears that any one is traveling thereon who is suspected of having cholera, or who has cholera, or who has been exposed to the infection of cholera, or who has in his possession any

baggage or effects that may convey that disorder, it shall be the duty of the inspecting officer to detain, stop or detach said train or other public conveyance and remove said individual, baggage or effects, and institute such measures of quarantine and disinfection as in his judgment may be necessary: *Provided*, That said removal take place within the jurisdiction of the county or city Board of Health under whose orders he is acting: *And provided also*, His acts are approved by said county or city Boards of Health.

Immediately upon said action being taken it shall be the duty of said inspector to notify the Board of Health under whose orders he is acting of the measures taken by him, and upon such notification said Board shall assume charge and institute such other measures of quarantine and disinfection as may be deemed necessary in the case. Freight or express matter suspected of containing the infection of cholera is also hereby subjected to detention and disinfection as above.

Immediately upon taking such charge the city or county Board of Health so doing shall notify the Secretary of the State Board of Health of its action in the case. The above rule shall remain and be in force until repealed by the State Board in session.

By order of the Board,

JOHN N. TAYLOR, M. D.,

President.

C. N. METCALF, M. D.,

Secretary.

IN MEMORIAM.

DR. W. V. WILES.

Dr. W. V. Wiles, for long years a resident of Spencer, died at his home on Monday morning, October 24, 1892, after a lingering illness. The deceased was born near Ripley, Ohio, March 27, 1827. In 1833 he moved to Fayette County, this State. His early education was commenced in the common schools of Fayette and Rush Counties, but at the age of nineteen he entered Fairview Academy, Rush County, when he

prepared for a course in college, which, however, he never attended. During the fall of 1851 he entered the Medical College at Cleveland, Ohio, where he took a course in medicine, and afterward located at Cataract, this county, where he entered the practice of medicine, where he remained until the fall of 1859, when he entered Rush Medical College, Chicago, where he graduated in the fall of 1860. After receiving his diploma he returned to Cataract, where he remained until August, 1862, when he received the appointment of first surgeon in 85th Regt. Ind. Vols.

After the close of the war he located at Greencastle and resumed the practice of medicine, remaining there but a short time, for in 1866 he changed to Spencer, where he remained until his death.

During his life the Doctor filled many places of trust, being appointed in March, 1879, by Governor Williams trustee of the Blind Asylum, besides holding many local offices in the town of his adoption.

Dr. Wiles was affable and courteous to all with whom he had dealings, ever obliging and indulgent. As a father and husband he was ever kind. As a citizen there was none more liberal and progressive, and his place will be hard to fill.

His literary education, as also his medical education, was liberal. After the completion of his literary studies he selected medicine as his chosen profession, and bent his every energy to attain success as a practitioner, and honorable distinction among his medical brethren. How well he succeeded and gratified his laudable ambition is best attested by his large and lucrative practice and the confidence imposed in him by the fraternity of medicine. His council and advice in the sick room will be missed by his medical brethren; but, more than that, his presence will be missed at the bedside of his patients, by the fathers and mothers, by the little ones who always had his sympathy and tenderest care.

They will look and watch and wait for his coming to appease and soothe their aches and pains; but they will look and watch and wait in vain for the coming of their friend and benefactor. He had endeared himself to the children, and he will be missed by no class more than by them. He will be remembered by them for his love and affection, and his many

kind words of tender and compassionate consideration. He was indeed their true friend, and they keenly feel their loss.

He filled the full measure, in all the relations of life, of an honorable, upright, Christian gentleman.

He was honored by his fellow citizens and by executive appointment with many important trusts, and discharged them all with business integrity and scrupulous fidelity.

Other societies and organizations and many persons will give expression in praise of his character and his virtues, and it is especially appropriate that his Masonic brethren, who mourn his loss and cherish his virtues, should place upon their records their appreciation of his high character as a man and Mason.

A long life has been given from early childhood to the active, intelligent and effective promotion of every good cause that came within the length of his cable tow. At the close of his earthly career his brethren are not called upon to apologize for any inactivity, uncertainty of views, hesitation or failure to render whatever assistance was within his power for the good of his race.

With remarkable mental and moral culture, he has rendered his name and character more remarkable than most men of his fellows for good deeds.

In his death our Order has suffered a great loss, but we are consoled with the reflection that in his life it was wonderfully the gainer.

A man of pure thoughts and a pure life is deserving of great honor. These he possessed, as his brethren and all who knew him can testify, and the honors were his to a remarkable degree. A more symmetrical and, taking all in all, a more useful life can scarcely be found among the men who have lived and died in Owen County.

In the promotion of good order, good morals and all that went to make man better and happier, he has borne his full measure. Any cause that can have the full sympathy and activity of such a man can not perish.

There are gathered together here to-night brethren of different parties, societies and denominations, who differ widely from each other upon many subjects, but we all unite in paying sincere tribute to our departed brother. Surely there is a great brotherhood of men which does not stop to inquire what

church, or party, or order a man belongs to, but looks to the man himself, and estimates according to his worth to society and humanity.

And as pure gold is current everywhere, so a pure and upright man like Dr. Wiles is current everywhere among all men. Not an old man, yet an old Mason. Nearly forty years ago he was taught to see the light by which Masons work.

Masonry teaches us that in youth we are to occupy our minds in the attainment of useful knowledge, and in manhood we should apply our knowledge to the discharge of our respective duties to God, to our neighbor and ourselves, so that in old age we may enjoy happy reflection upon a well spent life, and die in the hope of a glorious immortality.

Our brother fulfilled his Masonic teaching. The Bible was his trestle-board. He practiced the cardinal virtues, temperance, fortitude, prudence and justice; he held fast to the great tenets of the order, friendship, morality and brotherly love. He tried to walk uprightly before God and man. He honored Masonry as he honored every other order, society and station to which he belonged. He honored it, because his life was a continual exemplification of all that was good and pure and noble in it.

He was modest and unobtrusive, but his modesty bespeaks his merit. He was always ready to discharge the duties of the hour. Above all, he was a thoroughly conscientious and earnest man, who never sacrificed principle to expediency or self-interest. We can not estimate the worth of such a man to society. His influence will be felt long after he has passed away and his name is forgotten; like those teachings of childhood that long after we have forgotten when or how we learned them, quicken our consciences and influence our lives.

A useful life has passed away in the midst of innumerable friends, surrounded by his family and in his own home, with full consciousness that his end was rapidly approaching, with peace that passeth all understanding in his heart. Such is the fitting termination of a faithful servant of the Great High Priest.

His work is done, and it shall follow him; his example has made its impress, and we shall know more of the harvest from the seed that he has sown.

WILLIAM A. YOHN, M. D.

William A. Yohn, M. D., a member of the Porter County Medical Society, was born March 29, 1850, in Porter County, Indiana, and died August 12, 1892, at Valparaiso, Indiana.

His parents moved to Ohio when he was an infant. There he obtained his early education and taught school for a time.

When the Normal School at Valparaiso opened he was offered and accepted the chair of Science, which position he held for seventeen years, resigning it in order to give his entire time to his practice.

He studied medicine, and was graduated from the Indiana Medical College in 1879. An honorary degree was conferred on him by the Louisville, Ky., School of Medicine, in 1881. He was Professor of Chemistry in the College of Physicians and Surgeons, of Chicago, for five years. He was tendered the chair of Anatomy in the Chicago Medical College, but declined it on account of ill health. The degree of Doctor of Medicine was conferred on him by the Northwestern University in 1890.

Dr. Yohn was married to Mary A. Nolan in 1883, who survives him.

He was Secretary of the County Board of Health for several years, was a Master Mason, a member of the Sons of Veterans and of the I. O. O. F.

He was a tireless student, a careful and successful practitioner possessed of an indomitable will, enterprising, public spirited, and charitable. He was a friend to the poor, and many a professional young man owes his success in life to his encouragement and kind assistance.

WELL WATER AT THE STATE HOUSE.

Feeling confident that the water used for drinking purposes, which was derived from a driven well in the basement of the State House, is unfit for use, I made an examination of the same. The result confirmed my previous opinion, and I therefore ordered an analysis to be made thereof by Prof. Hurty with the following result. The well was accordingly condemned and ordered closed.

SANITARY ANALYSIS OF WATER FROM WELL IN BASEMENT OF STATE HOUSE.

INDIANAPOLIS, September 27, 1892.

State Board of Health, Indianapolis:

Appearance in two foot tube	Clear and bright.
Odor when heated to 100 Fah	None.
Chlorine in chlorides	6.
Nitrogen as free ammonia.....	0.002.
Nitrogen as albuminoid ammonia.....	0.006.
Nitrogen as nitrites	Present.
Nitrogen as nitrates	Abundant.
Solids	60.
Organic and volatile.....	9.

Figures given are parts in 100,000.

OPINION.—The presence of nitrites shows plainly that fermentation is going on in this water, and the abundant nitrates proves that extensive fermentation has been going on in the past, evidencing past pollution. The large quantity of chlorine shows present or past pollution with sewage. The small amount of the ammonias shows only a comparatively small amount of pollution now present, yet enough remains to condemn the water, especially when taken in connection with the fact that great past pollution has existed.

J. N. HURTY,
Analyst.

MARRIAGES.

The total number of marriages reported for the statistical year closing September 30, 1892, is 19,628—420 less than was returned for the preceding year; 19,243 of the contracting parties are white and 385 colored; 17,709 grooms and 18,078 brides are Americans; 1,138 grooms and 695 brides are foreign born. The nationality of 781 grooms and 855 brides was not reported. There were 371 grooms and 4,857 brides under 20 years; 79 grooms and 11 brides were between 70 and 80, and 4 grooms and 1 bride were over 80 years.

TABLE A.

Marriages by Months, Color and Nationality for the Year Ending September 30, 1892.

COUNTIES.	Total.	1891.												1892.												COLOR.		NATIONALITY.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		October.			November.			December.			January.			February.			March.			April.			May.			June.			July.			August.			September.			White.	Black.	AMERICAN.		FOREIGN.		NOT REPORTED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29			30	31	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Adams	180	25	63	61	41	19	17	15	23	35	14	11	7	6	17	19	8	17	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252</

Gibson	265	24	27	23	18	16	20	10	16	13	21	25	248	254	5	...	2	1
Grant	381	23	23	26	37	39	24	23	25	35	33	59	378	370	1	...	2	2
Greene	255	16	18	24	17	14	26	21	18	17	26	10	65	238	4	...	1	1
Hamilton	237	18	26	21	11	14	7	5	9	...	...	...	233	109	...	1	...	...
Hancock	110	17	11	12	11	14	...	...	...	...	...	...	110	...	...	...	...	...
Harrison	175	19	23	28	11	8	12	26	11	6	24	12	175	175	...	...	...	...
Hendricks	179	23	15	23	12	19	13	12	14	13	12	12	179	179	...	...	...	...
Henry	219	19	15	22	14	15	16	12	15	16	24	14	219	219	3	...	...	...
Honard	233	27	22	22	11	10	10	21	18	10	26	24	233	223	4	...	...	...
Huntington	215	23	14	14	21	11	15	22	6	15	19	17	211	210	4	5	...	...
Jackson	237	19	32	12	12	14	24	23	13	12	20	26	229	228	7	4	1	5
Jasper	48	8	15	10	10	9	10	6	8	2	2	4	83	87	1	2	...	...
Jay	220	21	27	7	29	18	46	25	14	16	13	18	219	218	1	...	...	...
Jefferson	330	21	30	34	13	37	13	9	26	9	17	31	330	330	2	...	...	...
Jennings	117	17	11	17	12	2	...	...	...	...	...	10	115	115	...	...	...	...
Johnson	195	16	18	11	23	28	13	13	17	5	17	30	151	151	...	...	44	44
Knorr	332	39	18	30	23	25	27	13	21	7	21	20	167	167	...	...	165	165
Kosciusko	277	24	24	24	17	8	24	27	14	36	27	11	272	272	1	...	4	4
Lagrange	121	8	10	26	5	10	7	9	9	6	4	12	115	120	6	...	...	...
Lake	256	31	23	17	18	14	25	25	18	18	13	25	171	178	85	78	...	...
Laporte	240	23	26	14	15	15	13	23	19	19	22	25	184	184	84	52	4	4
Lawrence	245	32	25	25	25	25	27	22	17	17	17	19	255	259	10	...	...	...
Madison	356	36	42	21	22	28	30	27	31	21	58	35	355	355	6	...	...	...
Marion	748	...	...	61	55	55	62	136	135	49	92	104	636	676	110	69	2	3
Marshall	250	24	23	19	30	19	28	14	22	9	23	20	238	243	12	7	...	...
Martin	82	...	...	12	16	8	9	9	8	11	5	6	83	83	...	...	...	...
Miami	175	22	13	12	17	17	13	14	12	13	17	19	160	166	15	8	...	1
Monroe	185	15	15	15	16	15	25	10	3	24	16	20	182	184	2	2	...	...
Montgomery	248	34	19	16	34	27	26	13	12	13	27	9	245	246	3	...	...	...
Morgan	104	...	...	16	16	21	7	7	7	16	3	3	104	104	6	3	...	2
Newton	67	9	5	9	7	8	6	5	7	2	3	3	59	62	...	...	...	...
Noble	195	28	23	22	19	8	20	8	9	11	16	14	188	187	6	6	1	2
Ohio	62	9	6	12	2	5	3	4	5	3	5	5	57	56	5	6	...	...
Orange	153	21	15	13	18	10	19	11	6	11	8	8	153	153	...	...	...	...
Owen	152	32	10	12	11	12	22	11	3	14	10	9	148	151	...	...	...	...
Parke	142	8	8	24	10	5	12	12	11	8	15	14	138	141	4	1	...	...
Perry	162	18	15	12	21	14	7	13	17	12	10	21	156	161	6	1	...	...
Pike	155	23	14	18	...	...	26	20	9	9	22	14	151	154	3	...	1	...
Porter	153	28	28	15	11	10	13	6	7	5	8	11	110	118	33	25	10	10
Posey	283	25	25	23	23	26	16	30	21	25	21	24	271	277	12	5	...	1
Pulaski	89	5	11	11	9	7	13	5	5	6	6	13	84	85	12	4	...	...
Putnam	171	21	10	11	13	5	13	9	14	8	24	15	168	170	5	3	...	...
Randolph	304	23	23	32	19	27	23	17	15	21	26	28	296	300	6	...	1	2

11—Bd. of H.

TABLE A—Continued.

COUNTIES.	Total.	1891.			1892.									Color.		Nationality.				Not Reported.	
		October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	White.	Black.	Groom.	Bride.	Groom.	Bride.		
Ripley	156	21	12	8	14	12	7	24	16	11	14	10	7	156	2	68	70	6	4	82	82
Rush	142	20	14	14	5	14	13	11	11	12	6	15	13	140	1	142	142	9	4	2	2
Scott	49	4	5	6	4	9	4	11	6	4	4	8	8	49	4	49	49	9	4	3	3
Shelby	273	38	13	8	61	26	24	18	16	15	17	33	27	262	4	262	266	9	4	3	13
Spencer	182	33	25	8	10	15	15	27	16	6	17	10	15	171	11	171	179	8	4	3	3
Starks	52	5	7	6	2	2	13	4	4	7	6	6	3	52	1	39	41	13	11	11	11
Steuben	82	17	15	13	14	10	10	38	45	30	16	47	37	82	8	81	82	97	78	9	5
St. Joseph	401	41	48	25	24	23	23	11	11	20	13	21	22	396	7	298	321	2	2	3	3
Sullivan	228	22	20	19	26	15	19	11	1	2	7	10	21	221	7	226	228	2	2	3	3
Switzerland	137	12	21	24	11	12	16	11	1	2	7	10	21	130	7	132	134	2	2	3	3
Tippocanoe	348	60	32	28	25	35	28	25	20	25	19	27	24	340	8	312	325	34	19	2	4
Tipton	211	21	23	14	24	16	21	12	11	9	11	12	37	208	3	197	185	1	1	13	25
Union	62	15	3	3	4	6	11	6	5	3	8	5	4	62	1	62	62	71	29	3	8
Vanderburgh	574	59	54	30	24	61	44	55	73	37	39	49	49	513	61	500	537	1	1	3	8
Vermillion	104	3	10	8	3	6	15	15	4	6	11	11	8	104	1	103	103	1	1	1	1
Vigo	483	102	45	25	36	23	26	39	44	27	29	41	46	458	25	451	483	31	19	1	1
Wabash	248	36	23	27	15	18	20	13	19	19	17	15	26	248	1	247	248	6	4	1	1
Warren	112	10	12	24	11	13	9	6	7	5	6	4	5	112	1	106	107	29	20	3	36
Warrick	182	20	15	19	14	17	18	17	11	21	11	13	6	181	3	121	126	29	20	3	3
Washington	160	26	13	20	16	12	12	11	11	13	8	10	10	160	1	157	157	16	6	1	1
Wayne	336	38	35	26	29	40	20	26	23	19	20	25	35	322	14	319	329	16	6	1	1
Wells	214	22	23	27	16	19	12	12	12	10	18	9	12	214	1	214	214	5	3	1	1
White	150	21	23	14	10	11	10	12	12	12	7	7	11	145	1	145	147	5	3	1	1
Whitley	152	21	13	14	9	16	15	9	10	11	11	7	16	152	1	147	151	5	1	1	1
Total	19,628	2,196	1,773	1,623	1,755	1,603	1,480	1,598	1,583	1,371	1,298	1,597	1,751	19,243	385	17,709	18,078	1,138	636	781	865

TABLE B.

Marriages, Grouped Ages, for Year Ending September 30, 1892.

COUNTIES.	GROUPED AGES.													
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.	
	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.
Total.	Not Reported.													
Adams	180	46	133	106	90	21	8	2	3	2	3	1	1	1
Allen	523	109	960	323	112	49	19	10	13	6	6	1	1	1
Bartholomew	227	56	160	146	37	13	14	5	7	1	1	1	1	1
Benton	102	19	72	74	25	8	3	1	1	1	1	1	1	1
Blackford	91	42	73	43	8	4	3	2	1	1	1	1	1	1
Boone	252	94	149	122	71	27	15	9	9	3	3	1	1	1
Brown	92	36	115	94	11	8	6	2	5	1	1	1	1	1
Carroll	141	71	213	201	56	21	20	11	6	7	7	3	2	2
Cass	311	71	80	50	40	20	30	90	8	1	1	1	1	1
Clark	545	..	..	..	..	..	..	..	..	..	..	..	..	..
Clay	272	70	200	159	42	33	16	5	4	2	2	3	1	1
Clinton	232	70	203	175	47	16	12	7	7	4	4	3	2	2
Crawford	135	64	50	34	14	16	10	2	2	1	1	1	1	1
Daviess	197	66	146	107	25	13	8	7	8	1	1	1	1	1
Dearborn	202	19	66	72	24	5	6	4	1	1	1	1	1	1
Deatur	130	35	99	74	19	5	6	3	2	4	4	1	1	1
DeKalb	131	43	117	102	39	18	13	5	5	4	4	1	1	1
Delaware	252	62	174	132	39	21	10	8	3	3	3	1	1	1
Illinois	135	89	132	103	61	12	7	8	2	2	2	1	1	1
Elkhart	427	89	250	285	127	50	20	16	11	4	5	1	1	1
Fayette	117	27	75	71	24	9	8	5	6	3	3	1	1	1
Floyd	276	46	152	151	45	27	19	7	7	6	6	1	1	1
Fountain	203	4	150	94	32	16	11	5	3	3	3	1	1	1
Funklin	137	24	102	100	30	14	11	5	6	4	4	1	1	1
Fulton	181	45	120	109	34	16	11	4	5	5	5	2	2	2

Gibson	255	2	60	185	164	50	22	11	3	4	24	1	2	1	1	2	2	4	3
Grant	331	23	138	268	184	54	41	23	9	6	4	3	2	1	1	1	1	1	4
Greene	51	9	122	180	194	6	23	18	4	1	1	1	2	1	1	1	1	1	3
Hamilton	237	3	65	76	128	24	10	3	1	1	1	1	1	1	1	1	1	1	1
Hancock	110	3	35	76	62	24	10	3	1	1	1	1	1	1	1	1	1	1	1
Harrison	175	2	37	124	107	33	22	9	6	3	24	2	1	1	1	1	1	1	1
Hendricks	179	2	40	127	107	33	22	7	4	3	4	2	1	1	1	1	1	1	1
Henry	219	3	48	149	130	32	21	15	4	3	4	2	1	1	1	1	1	1	1
Howard	223	2	73	145	112	51	25	11	13	6	1	1	1	1	1	1	1	1	1
Huntington	215	1	54	138	133	56	15	11	10	6	1	1	1	1	1	1	1	1	1
Jackson	237	5	65	181	140	43	21	16	5	7	2	1	1	1	1	1	1	1	1
Jasper	88	2	22	66	59	15	6	8	1	6	6	1	1	1	1	1	1	1	1
Jasper	230	6	67	155	99	29	11	13	2	1	1	1	1	1	1	1	1	1	1
Johnson	330	4	20	66	76	29	11	6	6	7	1	1	1	1	1	1	1	1	1
Jennings	117	4	20	66	76	29	11	6	6	7	1	1	1	1	1	1	1	1	1
Johnson	195	2	4	38	35	5	40	10	7	6	8	1	1	1	1	1	1	1	1
Knox	332	7	73	132	160	59	28	8	8	9	4	1	1	1	1	1	1	1	1
Kosciusko	277	3	79	184	149	53	28	11	3	3	8	1	1	1	1	1	1	1	1
Lagrange	121	2	33	77	69	28	11	13	3	3	8	1	1	1	1	1	1	1	1
Lake	256	2	67	186	159	50	22	13	3	3	8	1	1	1	1	1	1	1	1
Laporte	240	1	48	176	157	43	19	6	7	9	4	1	1	1	1	1	1	1	1
Lawrence	265	7	92	191	136	41	28	10	4	8	1	1	1	1	1	1	1	1	1
Madison	356	9	145	260	174	64	31	17	5	5	1	1	1	1	1	1	1	1	1
Marion	748	4	132	456	451	169	103	65	38	28	10	1	1	1	1	1	1	1	1
Marshall	250	3	72	179	145	40	22	11	6	14	4	1	1	1	1	1	1	1	1
Martin	82	1	35	53	30	17	11	4	5	7	3	1	1	1	1	1	1	1	1
Miami	175	1	34	116	116	46	16	6	6	5	1	1	1	1	1	1	1	1	1
Monroe	185	6	42	116	95	41	12	8	4	8	1	1	1	1	1	1	1	1	1
Montgomery	248	5	53	151	153	51	26	23	9	5	1	1	1	1	1	1	1	1	1
Morgan	104	4	38	69	69	20	12	8	4	3	2	1	1	1	1	1	1	1	1
Newton	67	2	21	48	36	11	7	3	2	3	1	1	1	1	1	1	1	1	1
Noble	195	1	42	136	122	40	20	6	7	7	3	1	1	1	1	1	1	1	1
Ohio	62	8	12	86	30	6	6	2	2	4	1	1	1	1	1	1	1	1	1
Orange	153	3	63	107	70	26	12	6	6	4	1	1	1	1	1	1	1	1	1
Owen	152	2	41	91	83	31	20	14	6	5	1	1	1	1	1	1	1	1	1
Parke	142	1	51	99	72	26	14	9	6	5	1	1	1	1	1	1	1	1	1
Perry	162	6	52	125	93	24	15	4	2	2	1	1	1	1	1	1	1	1	1
Pike	155	4	53	104	84	30	12	9	4	6	1	1	1	1	1	1	1	1	1
Porter	153	3	25	84	89	40	22	14	4	3	2	1	1	1	1	1	1	1	1
Posey	233	8	82	187	105	71	21	11	6	5	2	1	1	1	1	1	1	1	1
Pulaski	89	1	35	73	49	13	30	2	1	1	1	1	1	1	1	1	1	1	1
Putnam	171	3	34	114	96	30	23	13	6	5	1	1	1	1	1	1	1	1	1
Randolph	304	11	91	205	165	40	21	20	13	14	11	1	1	1	1	1	1	1	1

TABLE B—Continued.

COUNTIES.	Total.	GROUPED AGES.											
		Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	
		Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.
Ripley	156	18	42	49	87	17	8	4	2	1	2	2	84
Rush	142	36	87	103	24	22	14	6	2	8	1	1	1
Scott	49	19	38	24	5	5	5	1	1	1	1	2	2
Shelby	273	44	185	161	64	23	23	14	8	2	2	2	2
Spencer	182	60	104	124	104	29	9	14	5	4	1	5	5
Starke	52	19	35	26	26	10	4	3	3	1	1	1	1
Steuben	82	26	59	45	18	18	6	3	2	1	1	1	1
St. Joseph	404	98	286	251	72	31	31	21	15	9	2	2	2
Sullivan	228	63	164	143	43	11	11	6	4	1	1	1	1
Switzerland	137	2	100	82	21	9	9	5	5	5	2	2	2
Tipecanoe	348	66	240	223	75	41	41	14	7	6	1	1	4
Tipton	211	90	147	92	29	12	12	5	3	5	2	2	11
Union	62	13	34	24	1	2	2	2	2	1	1	1	21
Vanderburgh	574	110	382	378	127	49	49	29	14	16	4	8	14
Vermillion	104	3	63	52	23	14	5	6	6	2	1	2	4
Vigo	483	8	134	310	102	50	50	36	1	8	1	1	2
Wabash	248	60	188	149	30	17	17	10	6	2	2	10	11
Warren	112	38	64	61	8	8	8	5	2	2	1	1	1
Warriek	183	43	123	109	28	18	18	15	6	4	1	1	2
Washington	160	46	108	95	29	13	13	10	2	2	1	4	5
Wayne	336	61	235	216	59	35	35	20	18	9	1	1	3
Wells	214	4	161	131	31	17	17	5	5	5	3	1	2
White	150	43	98	85	33	14	14	7	6	2	2	2	1
Whitley	152	33	103	115	33	9	9	10	5	3	1	1	1
Total	19,628	371	4,857	12,467	10,601	3,460	1,723	994	568	504	208	239	1,573

Gibson	255	2	60	185	184	50	22	11	8	4	24	1	3	2	1	2	4
Grant	381	23	32	248	184	58	41	23	9	9	4	1	3	20	4	3	3
Greene	51	9	42	39	124	37	26	18	12	4	3	1	2	4	7	1	1
Hamilton	287	3	66	154	124	37	10	9	1	1	1	1	1	2	1	1	1
Hancock	110	3	36	76	62	24	10	3	1	1	1	1	1	1	1	1	1
Harrison	175	2	37	124	107	83	22	9	6	3	2	2	2	1	1	1	1
Hendricks	179	2	40	127	107	83	22	7	6	3	2	2	2	1	1	1	1
Henry	219	3	48	148	130	32	21	15	8	3	4	1	3	1	2	3	3
Howard	223	3	73	145	112	51	25	15	13	3	4	1	1	1	1	1	1
Howland	215	1	54	136	133	55	15	11	10	6	1	1	1	1	1	1	1
Jackson	237	5	65	161	140	43	21	16	5	7	2	3	3	1	1	2	2
Jasper	88	2	22	66	52	15	16	3	1	6	6	2	1	1	1	7	7
Jay	230	6	67	156	99	29	11	13	2	6	1	2	2	330	4	33	33
Jefferson	330	4	20	66	76	29	11	6	6	7	1	3	3	1	1	330	330
Jennings	117	4	20	66	76	29	11	6	6	7	1	3	3	1	1	1	1
Johnson	332	2	73	132	160	59	30	10	7	6	3	1	1	152	152	58	58
Knox	192	7	79	184	149	58	28	8	8	9	6	4	4	59	59	1	1
Koehnke	277	3	33	184	149	58	28	7	8	9	6	4	4	1	1	1	1
Lagrange	131	2	67	186	159	50	22	13	3	3	3	2	2	1	1	1	1
Lake	256	2	67	186	159	50	22	13	3	3	3	2	2	1	1	1	1
Laporte	240	1	48	176	157	43	19	6	7	9	4	4	4	1	1	1	1
Lawrence	295	7	92	191	136	41	28	10	4	8	1	4	4	1	1	1	1
Madison	356	9	145	260	174	64	31	17	5	5	1	5	5	1	1	30	30
Marion	748	4	132	456	451	169	103	65	38	28	10	2	2	1	1	6	6
Marshall	250	3	72	179	145	40	22	11	6	14	4	2	1	1	1	1	1
Martin	82	1	35	53	30	17	11	4	5	6	3	1	1	1	1	1	1
Miami	175	1	34	115	116	46	16	6	6	7	3	2	2	1	1	1	1
Montroe	185	6	42	116	85	20	12	8	4	4	1	1	1	1	1	1	1
Montgomery	248	5	53	151	133	51	28	29	9	4	2	2	2	1	1	1	1
Morgan	104	4	38	69	50	20	12	3	4	4	2	2	2	1	1	1	1
Newton	67	2	21	48	36	11	7	3	2	2	1	1	1	1	1	1	1
Noble	195	1	42	136	122	40	20	6	7	4	3	2	2	1	1	1	1
Ohio	62	8	12	36	30	6	6	2	4	4	1	1	1	1	1	1	1
Orange	153	63	63	107	70	26	12	6	6	4	1	2	2	1	1	1	1
Owen	152	2	41	91	83	31	20	14	6	6	1	1	1	1	1	1	1
Parke	142	1	51	99	72	25	14	9	6	6	1	1	1	1	1	1	1
Perry	162	6	52	125	93	24	15	4	2	2	2	2	2	1	1	1	1
Pike	155	4	53	104	84	30	12	9	4	6	1	2	2	1	1	1	1
Porter	153	25	25	84	89	40	22	14	4	3	2	2	2	1	1	1	1
Posey	283	3	82	187	165	71	21	11	6	6	3	3	3	1	1	1	1
Polaski	89	1	35	73	114	13	4	2	1	1	1	1	1	1	1	1	1
Putnam	171	3	34	96	96	30	23	13	6	6	1	1	1	1	1	1	1
Randolph	304	11	91	205	165	40	21	20	13	14	11	9	9	2	2	1	1

TABLE B—Continued.

COUNTIES.	Total.	GROUPED AGES.											
		Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	
		Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.
Ripley	156	18	42	49	17	8	4	2	1	2	2	2	84
Rush	142	36	87	103	22	14	6	2	2	8	2	1	88
Scott	49	19	24	38	6	5	1	2	2	2	2	1	1
Shelby	273	4	54	185	23	23	14	8	2	4	5	2	2
Spencer	162	60	104	124	29	9	14	5	2	2	1	5	2
Starke	52	19	26	35	10	4	4	3	1	2	1	1	1
Steuben	82	28	59	59	18	6	3	2	1	2	1	1	1
St. Joseph	404	98	251	286	72	31	21	15	15	6	2	2	1
Sullivan	228	63	143	164	43	11	8	4	1	1	2	2	4
Switzerland	137	38	82	100	21	9	5	6	1	1	1	2	2
Tipecanoe	348	66	223	240	75	41	14	7	6	5	1	4	4
Tipton	211	10	92	147	29	12	5	2	2	3	2	12	11
Union	62	1	24	31	5	2	1	2	2	5	1	21	21
Vanderburgh	574	4	362	378	49	49	29	14	16	7	4	8	14
Vermillion	104	3	52	63	23	14	5	6	1	2	1	2	4
Vigo	483	8	275	310	102	50	36	15	18	6	8	1	2
Wabash	248	60	149	188	30	17	11	6	6	2	2	10	11
Warren	112	33	61	86	11	11	8	5	1	1	1	1	1
Warrick	182	7	109	123	28	18	15	6	4	4	2	1	2
Washington	160	3	96	106	29	13	10	2	2	1	1	4	5
Wayne	396	4	216	235	59	35	20	18	9	2	6	1	3
Wells	214	4	161	177	31	13	7	3	2	4	3	1	2
White	150	3	86	101	27	14	10	6	6	5	1	1	1
Whitley	152	1	103	113	23	9	7	5	1	1	1	1	1
Total	19,628	371	4,887	12,467	10,601	3,460	1,723	994	568	504	208	239	86
												79	11
												4	1
												1,510	1,573

BIRTHS.

The total number of births reported to this office for the statistical year ending September 30, 1892, is 33,661; 251 less than were reported the previous year.

Of this number 17,523 are males, and 16,138 are females; 557 are colored and 800 still born.

There were 352 twin births, and 3 triplets; 531 children were illegitimate.

The smallest number (2,170) was born in December, and the greatest number (3,329) was born in October.

The nationality of the parents is as follows: 29,101 fathers and 30,202 mothers are Americans; 2,929 fathers and 2,153 mothers are foreign born; 1,279 fathers and 954 mothers were not reported.

TABLE A.

Births by Months, Color and Nationality of Parents for Year Ending September 30, 1892.

COUNTIES.	1891.				1892.								Total.	COLOR.				NATIONALITY.															
	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.		September.	Males.	Females.	Male.	Female.	WHITE.		COLOR'D		AMERICAN.		FOREIGN.		Not Reported.						
																			Male.	Female.	Male.	Female.	Father.	Mother.	Father.	Mother.							
Adams	22	35	35		25	19	31	27	30	20	18	26	22	158	135	233	158	135	158	135	247	253	26	18	19	21	253	491	474	10	8	71	56
Allen	26	34	34		12	26	37	27	32	28	28	25	25	171	144	315	171	144	171	144	197	217	26	18	19	21	217	176	176	10	8	71	56
Bartholomew	36	33	33		12	26	37	27	32	28	28	25	25	303	241	549	303	241	303	241	487	525	26	18	19	21	487	303	303	1	1	3	3
Benton	10	11	11		12	24	24	24	15	15	15	14	14	109	96	216	109	96	109	96	164	172	26	18	19	21	164	172	164	1	1	14	14
Blackford	30	11	11		15	14	24	24	17	11	11	23	23	108	90	198	108	90	108	90	184	192	2	3	3	3	184	192	184	1	1	1	1
Boone	70	52	50		63	37	35	46	49	15	99	27	26	305	251	556	305	251	305	251	474	491	10	8	8	8	474	491	474	10	8	71	56
Brown	21	11	11		14	17	13	13	21	12	99	13	13	158	135	176	158	135	158	135	176	176	1	1	1	1	176	176	176	1	1	3	3
Carroll	15	15	15		16	16	16	16	26	12	42	33	30	159	149	308	159	149	159	149	249	303	1	1	1	1	249	303	249	1	1	3	3
Cass	33	32	32		32	32	32	32	33	22	42	33	30	177	131	311	177	131	177	131	246	247	34	16	16	16	246	247	246	4	4	4	4
Clark	45	24	24		22	26	22	23	19	22	32	18	19	136	116	252	127	103	127	103	204	224	34	16	16	16	204	224	204	6	6	4	4
Clay	28	25	25		124	45	37	58	59	59	51	55	43	294	317	611	293	315	293	405	466	95	59	59	59	405	466	405	3	3	103	73	
Clinton	22	42	42		7	24	99	99	32	29	97	32	27	217	207	425	217	207	217	393	396	3	3	3	3	393	396	393	1	1	24	23	
Crawford	29	24	24		10	13	10	29	32	26	49	10	9	120	108	228	120	108	120	203	207	15	8	8	8	203	207	203	5	5	16	6	
Davies	41	37	37		45	47	48	54	54	53	56	61	50	287	302	589	283	301	283	541	564	18	18	18	18	541	564	541	5	5	16	6	
Dearborn	18	21	21		19	21	19	30	21	6	27	38	24	134	131	265	132	130	132	221	241	30	18	18	18	221	241	241	10	10	2	2	
Decatur	23	6	6		25	20	16	21	16	22	23	27	35	133	124	257	131	123	131	247	253	8	6	6	6	247	253	247	8	8	19	15	
Dekalb	23	23	23		21	23	36	16	20	15	10	9	23	93	80	173	93	80	93	146	152	36	22	22	22	146	152	146	36	36	63	63	
Delaware	80	57	43		46	80	54	66	59	52	57	55	44	353	340	633	349	336	353	583	600	36	22	22	22	583	600	583	36	36	15	15	
Dubuque	27	27	27		44	39	45	41	40	41	40	45	36	239	229	468	239	229	239	421	445	106	106	106	106	421	445	421	106	106	5	5	
Elkhart	173	74	67		82	67	80	62	57	17	80	67	58	503	454	957	500	453	500	734	767	106	68	68	68	734	767	734	106	106	101	106	
Fayette	13	18	8		14	12	11	5	7	4	10	15	7	59	66	124	58	64	58	116	117	6	6	6	6	116	117	116	6	6	1	1	
Floyd	42	32	8		32	34	37	48	33	22	54	43	12	198	212	410	194	205	198	341	361	39	38	38	38	341	361	341	39	39	27	27	
Franklin	30	12	12		17	2	6	28	28	16	16	16	16	121	123	243	121	122	121	239	236	14	14	14	14	239	236	236	14	14	2	2	
Fulton	3	3	3		11	11	11	5	12	8	7	9	6	43	29	72	43	29	43	66	70	3	3	3	3	66	70	66	3	3	1	1	
Fulton	28	30	30		2	8	16	13	13	2	25	21	28	136	140	276	136	140	136	276	275	106	106	106	106	276	275	276	106	106	2	2	

Morgan	13	17	13	7	11	18	23	27	50	11	2	52	115	86	201	113	86	201	201	14	10	14	5	5
Newton	14	16	9	6	6	12	11	37	13	4	14	4	56	63	119	56	63	100	138	6	5	10	11	11
Noble	10	10	4	4	4	12	11	27	7	10	9	6	76	79	155	76	79	138	78	5	3	10	11	11
Ohio	25	10	4	20	20	12	21	18	11	23	16	11	39	42	81	39	41	199	199	1	1	23	15	15
Orange	19	26	15	41	36	27	18	22	13	29	20	19	143	136	277	139	133	250	258	1	1	23	15	15
Owen																								
Parke	9	11	14	21	15	11	12	31	4	11	10	7	70	71	141	69	70	130	134	10	7	14	14	14
Perry	20	23	7	36	25	19	19	31	18	20	18	26	144	118	242	143	117	237	147	10	10	14	14	14
Pike	3	15	4	15	19	14	11	14	9	16	8	8	70	58	128	70	58	117	122	2	2	2	2	2
Porter	31	16	11	60	13	17	16	9	6	4	22	22	119	93	212	119	93	153	159	51	50	7	7	7
Posey	70	32	39	60	31	52	39	43	40	38	4	32	265	248	513	262	243	469	485	27	10	10	10	10
Pulaski	5	16	2	11	8	14	4	10	12	13	12	5	54	53	107	54	53	97	98	5	6	6	6	6
Ransom	46	36	29	39	36	40	44	34	27	36	46	31	252	222	477	247	216	443	455	11	11	12	12	12
Randolph	85	42	42	42	42	42	42	42	42	42	42	42	325	312	637	316	308	615	626	11	11	12	12	12
Ripley	21	21	12	12	12	12	12	12	12	12	12	12	143	121	263	143	121	243	249	19	19	12	12	12
Rush	26	22	18	32	13	27	19	23	25	18	26	13	149	135	272	145	121	261	266					
Scott	20	7	5	10	9	5	16	5	2	11	8	4	60	42	102	60	42	102	102	15	5	5	5	5
Shelby	71	11	14	64	38	29	55	27	36	57	24	35	250	217	467	245	215	403	419	1	2	2	2	2
Spencer	15	17	6	35	33	7	11	11	11	3	7	4	35	29	64	35	29	54	58	9	5	5	5	5
Stark	28	12	14	5	1	5							39	39	63	39	24	60	60	1	1	1	1	1
Steuben																								
St. Joseph	57	53	45	49	31	50	80	55	52	44	50	34	310	290	600	307	289	326	341	212	205	58	58	58
Sullivan	24	33	33	33	25	28	16	26	25	15	19	9	141	123	289	140	127	284	285	1	1	1	1	1
Switzerland	24	33	33	33	25	28	16	26	25	15	19	9	141	123	289	140	127	284	285	1	1	1	1	1
Tipppecanoe	24	33	33	33	25	28	16	26	25	15	19	9	141	123	289	140	127	284	285	1	1	1	1	1
Tipton	16	23	46	19	10	33	16	17	43	24	40	40	172	153	323	172	153	303	236	4	4	15	15	15
Union	3	6	7	8	14	9	12	3	8	6	5	5	46	46	86	46	38	86	85	298	188	28	28	28
Vanderburgh	99	84	77	162	119	120	123	96	122	110	123	86	672	617	1,280	624	577	989	1,071	6	4	4	4	4
Vermillion	12	11	6	15	8	15	8	75	58	94	98	51	401	403	804	389	386	658	711	100	59	42	30	30
Vigo	109	60	47	60	59	36	60	75	58	94	98	51	401	403	804	389	386	658	711	100	59	42	30	30
Wabash	35	13	41	52	28	44	31	93	27	19	12	26	178	196	364	177	186	353	349	8	12	9	8	8
Warren	8	15	12	6	5	3	8	23	9	10	6	6	48	47	95	48	47	82	84	8	8	9	8	8
Warrick	28	24	16	28	37	38	20	26	20	29	27	24	160	164	324	159	163	250	273	28	14	45	36	36
Washington	9	15	9	10	10	10	20	9	6	7	8	8	67	66	123	67	56	122	122					
Wayne	72	55	54	49	67	68	69	83	53	60	63	63	404	352	756	390	342	682	708	73	46	14	14	14
Wells	41	30	16	9	16	15	18	11	8	13	19	4	97	78	175	97	78	175	175	7	7	7	7	7
White	23	37	10	23	19	15	52	16	23	43	83	86	162	173	335	162	173	335	322	17	7	8	8	8
Whitley	25	15	10	22	27	22	16	20	16	17	19	25	115	119	234	115	119	234	223	4	3	8	6	6
Total	3,329	2,554	2,170	3,175	2,757	2,879	3,082	2,821	2,500	3,071	2,862	2,451	17,523	6,138	33,681	17,229	15,975	29,101	30,202	2,929	2,153	1,279	984	984

Births, Number of Child to Mother, Grouped Ages of Parents, Still,

COUNTIES.	Total.	NUMBER OF CHILDREN BORN TO THIS MOTHER.												Not Reported.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th and Over.	
Adams	293	71	52	33	39	27	23	7	12	8	5	2	8	6
Allen	315	73	48	35	26	21	13	8	3	6	1	2	3	76
Bartholomew	549	158	100	60	63	52	39	21	14	14	7	5	8	8
Benton	205	54	38	27	25	22	11	9	9	3	1	3	3	3
Blackford	198	37	33	43	31	15	11	15	1	1	3	2	2	4
Boone	556	162	110	93	57	43	28	22	14	9	5	3	2	10
Brown	176	34	27	32	16	16	16	8	10	6	6	2	2	1
Carroll	308	73	60	55	41	30	14	8	12	3	7	2	1	2
Cass	311	85	74	47	31	25	12	12	9	5	4	1	6	6
Clark	252	70	43	27	33	24	13	9	10	6	2	2	5	8
Clay	611	119	102	111	76	53	51	28	28	8	7	5	5	18
Clinton	425	114	78	74	55	29	24	13	11	10	6	4	1	6
Crawford	228	73	55	35	27	14	10	3	11	6	4	1	1	11
Daviess	589	129	115	82	76	51	33	26	29	16	7	3	7	15
Dearborn	265	72	47	38	31	24	14	19	5	6	8	1	1	1
Decatur	257	76	48	36	22	20	12	19	9	5	5	5	5	4
Dekalb	173	56	33	29	19	15	7	4	3	2	2	1	1	4
Delaware	693	188	163	96	74	50	35	38	20	12	6	5	2	2
Dubois	468	120	81	64	48	41	32	27	23	12	10	5	3	2
Elkhart	957	256	214	147	106	59	58	17	31	14	5	6	8	36
Fayette	124	45	21	17	12	10	4	4	8	2	1	1	1	1
Floyd	410	115	81	68	45	33	9	10	9	2	4	2	1	31
Fountain	243	68	60	33	24	24	15	5	6	4	4	2	2	1
Franklin	72	17	13	9	11	4	6	2	4	3	1	1	1	1
Fulton	276	94	65	32	30	13	21	10	7	1	4	1	1	1
Gibson	407	107	71	67	48	30	23	17	17	5	4	7	5	6
Grant	537	162	125	73	40	35	34	21	11	7	6	2	2	21
Greene	281	55	37	35	26	27	16	14	5	7	1	2	1	6
Hamilton	548	136	104	78	80	44	26	28	17	11	5	4	3	12
Hancock	364	89	77	47	35	38	31	15	10	9	7	3	2	1
Harrison	348	77	65	43	43	35	28	22	8	13	2	3	2	7
Hendricks	395	111	67	67	44	28	19	19	18	9	3	2	5	3
Henry	526	160	111	89	45	42	27	19	11	10	2	4	2	3
Howard	385	126	86	68	31	16	20	15	8	8	3	1	3	3
Huntington	466	138	88	62	57	39	30	22	16	6	4	1	2	3
Jackson	380	106	60	54	54	27	17	20	12	12	4	1	2	11
Jasper	108	28	16	16	7	11	8	7	2	1	4	5	1	3
Jay	590	135	119	61	59	32	24	28	16	12	7	3	2	2
Jefferson	211	69	46	34	19	16	13	6	7	6	2	1	1	1
Jennings	217	56	40	31	24	15	12	17	9	3	4	2	2	4

LE B.

Plurality, and Illegitimate Births, Year Ending September 30, 1892.

GROUPED AGES OF PARENTS.												STILL BIRTHS.		PLU- RALITY BIRTHS		Illegit- imate Births.	
Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Rep'd.		Male.	Female.	Male.	Female.
Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.				
1	16	91	146	127	90	50	25	4	...	...	...	19	15	1	1	2	1
2	12	115	169	119	88	48	20	6	...	...	...	26	25	1	1	6	1
3	59	238	275	194	174	68	33	23	...	4	1	19	7	74	10	7	1
4	16	62	109	93	57	29	7	4	...	...	...	15	14	2	1	3	1
5	22	97	93	52	58	26	12	7	1	1	...	10	10	3	3	1	1
6	53	185	284	224	176	89	29	13	5	1	...	42	8	3	2	1	...
7	27	70	79	62	50	28	19	8	...	2	...	1	1	...	1	...	1
8	30	107	164	124	87	37	18	6	2	2	...	26	...	...	6	...	...
9	20	117	119	90	71	49	11	8	...	2	...	40	86	3	4	...	...
10	20	94	128	92	74	35	16	13	...	1	...	9	6	...	9	2	...
11	51	246	329	220	169	94	29	10	...	1	1	28	25	5	4	12	3
12	45	159	269	175	129	50	12	5	1	2	...	23	24	8	4	7	3
13	101	88	61	37	29	12	22	10	...	3	...	46	8	12	5	7	10
14	42	212	310	236	176	89	42	19	...	3	...	13	5	10	7	11	8
15	17	104	133	100	82	37	17	6	...	...	1	12	12	2	...	4	6
16	11	103	99	101	109	35	31	3	1	...	...	4	4	1	2	3	1
17	17	67	87	52	40	23	7	3	...	1	...	25	20	7	4	3	...
18	82	300	372	274	188	86	35	9	...	2	3	6	16	8	5	3	9
19	27	161	232	205	168	71	28	16	...	...	...	6	7	1	1	6	5
20	78	344	467	321	217	124	14	25	...	2	...	125	165	19	9	11	2
21	3	4	65	52	46	24	7	...	...	...	...	2	1	3	1	2	1
22	21	186	224	146	114	31	8	8	...	...	...	34	40	7	4	5	3
23	32	103	125	93	51	28	18	8	...	2	...	1	17	...	...	...	2
24	5	23	38	31	25	11	3	1	...	...	...	5	...	...	1	1	...
25	23	117	148	109	89	35	11	7	1	1	...	4	4	4	3	...	2
26	3	144	207	166	116	57	24	9	...	...	...	24	16	5	4	4	3
27	1	46	263	171	132	50	28	16	...	1	...	33	33	5	3	3	6
28	1	23	98	87	69	36	11	1	...	...	...	3	2	...	1	8	...
29	4	60	200	232	169	69	19	15	...	2	1	13	8	9	8	5	1
30	2	33	128	191	107	59	20	6	...	...	...	16	7	6	3	8	4
31	1	19	157	185	126	112	37	6	...	1	...	14	9	9	4	4	2
32	3	40	160	199	150	125	53	17	...	4	...	8	8	5	4	8	1
33	4	60	231	291	182	134	72	22	...	...	2	13	12	1	1	9	...
34	2	85	211	203	128	91	39	6	...	3	...	2	...	...	...	...	1
35	2	38	192	249	174	144	62	16	7	...	1	26	17	7	4	1	6
36	4	43	155	204	137	110	58	17	9	...	3	...	11	3	12	6	3
37	8	35	56	41	31	24	12	3	...	...	...	4	...	3	1	3	1
38	4	49	210	277	180	137	75	29	12	...	1	...	14	4	6	7	3
39	8	69	102	76	69	26	11	9	...	1	...	29	20	6	1	1	10
40	2	13	77	109	86	71	37	15	5	...	...	7	6	2	1	3	5

TABLE B—

COUNTIES.	Total.	NUMBER OF CHILDREN BORN TO THIS MOTHER.												12th and Over.	Not Reported.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.			
Johnson	357	89	91	52	44	22	14	17	12	6	3	2	2	3	2
Knox	338	74	59	55	44	43	21	12	13	11	3	3	1	1	2
Kosciusko	266	76	60	45	26	15	14	8	10	3	5	1	3	7	7
Lagrange	380	101	62	59	36	37	22	22	13	11	7	2	2	1	1
Lake	340	72	63	59	36	31	28	20	9	6	3	2	3	3	8
Laporte	672	175	127	116	86	61	32	21	19	13	11	2	5	4	4
Lawrence	418	105	90	64	37	32	27	19	12	5	5	2	2	18	18
Madison	675	200	143	109	61	48	36	25	21	19	2	3	7	39	39
Marion	2,382	895	603	439	300	197	157	94	54	43	29	12	20	2	2
Marshall	341	109	60	56	35	20	15	16	9	9	6	2	2	2	2
Martin	83	16	14	11	16	7	2	6	4	1	2	1	1	4	2
Miami	138	38	24	24	9	13	10	7	4	4	3	2	3	5	5
Monroe	342	96	70	38	42	35	22	11	9	6	4	2	1	10	10
Montgomery	507	153	102	83	52	34	34	17	9	4	4	1	1	4	4
Morgan	201	57	39	32	34	10	13	6	4	1	1	1	1	4	2
Newton	119	35	16	19	15	15	10	2	1	1	1	1	1	4	2
Noble	155	44	40	28	16	12	4	5	3	1	1	1	1	1	1
Ohio	81	19	13	23	8	7	2	2	2	5	5	1	1	3	3
Orange	201	43	41	33	23	12	15	11	8	6	3	2	1	3	3
Owen	277	72	61	47	28	17	21	11	6	6	3	2	1	3	3
Parke	141	25	31	24	14	13	10	12	4	4	3	3	1	39	39
Perry	262	44	49	31	23	19	14	10	14	6	7	2	4	2	2
Pike	128	37	17	17	18	13	5	5	5	3	4	2	1	1	1
Porter	212	50	47	34	26	19	14	10	5	3	2	1	1	16	16
Posey	513	127	100	68	60	50	45	15	13	8	6	4	1	1	1
Pulaski	107	35	17	17	8	10	3	7	5	3	2	2	5	2	2
Putnam	474	131	96	69	59	35	30	16	13	12	6	2	2	7	7
Randolph	637	165	134	100	87	61	34	27	14	5	9	2	2	1	1
Ripley	263	60	52	41	27	27	16	12	12	4	5	1	6	6	6
Rush	272	79	51	36	33	22	19	9	7	3	2	3	1	1	1
Scott	102	22	22	13	7	9	11	3	6	2	2	2	5	3	3
Shelby	467	133	85	73	61	31	19	16	18	6	5	5	5	10	10
Spencer	245	51	47	50	24	26	13	9	10	3	2	1	3	6	6
Starke	64	11	11	10	11	11	5	3	3	1	1	1	1	1	1
Steuben	63	12	12	9	10	7	1	2	2	1	1	1	1	8	8
St. Joseph	600	157	125	92	56	54	40	21	15	17	8	3	4	8	8
Sullivan	269	75	52	52	21	29	14	8	7	3	2	1	3	2	2
Switzerland	89	21	11	14	11	12	7	4	2	3	3	1	1	4	4
Tippecanoe	370	108	78	53	28	27	18	18	12	9	5	3	3	11	11
Tipton	325	84	62	51	27	24	20	15	21	6	2	4	2	7	7
Union	86	33	21	11	6	6	4	1	1	1	2	2	2	2	2
Vanderburgh	1,289	338	240	187	158	109	78	52	52	25	9	6	7	28	28
Vermillion	124	38	28	15	13	7	7	2	5	2	2	2	3	2	2
Vigo	804	260	157	120	78	53	38	30	19	15	10	8	1	15	15
Wabash	364	105	85	62	34	25	18	11	6	3	3	1	1	11	11
Warren	95	31	21	12	8	9	3	3	1	1	1	1	1	5	5
Warrick	324	80	73	50	30	18	23	12	14	8	6	4	1	5	5
Washington	123	32	29	26	12	3	2	6	3	3	3	1	2	1	1
Wayne	756	248	144	116	78	58	41	32	12	9	9	4	3	2	2
Wells	175	51	30	23	25	16	11	7	2	2	1	1	1	7	7
White	336	97	54	50	31	37	19	14	11	5	3	5	1	8	8
Whitley	234	67	48	39	28	21	8	10	4	1	2	2	2	3	3
Total	33,661	9,191	6,680	5,107	3,690	2,659	1,927	1,345	989	596	383	206	215	673	673

Continued.

GROUPED AGES OF PARENTS.														STILL BIRTHS.		PLU-RALITY BIRTHS.		Illegit-imate Births.	
Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Rep'd.		Male.	Female.	Male.	Female.	Male.	Female.
Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Father.	Father.	Mother.						
3	35	147	183	127	111	48	14	14	14	1	1	14	10	6	2	5	3	3	2
4	23	106	177	140	110	47	9	9	8	1	1	32	14	12	3	6	4	3	3
2	17	120	151	98	85	30	9	8	1	1	1	3	3	12	3	6	4	3	2
2	41	157	190	144	119	49	23	16	13	5	5	4	8	20	14	1	4	4	2
1	29	122	174	134	99	62	29	13	1	1	1	1	1	1	1	4	1	1	1
1	39	245	365	283	215	88	35	25	1	1	1	19	8	3	6	5	13	4	4
5	38	163	206	133	115	65	17	10	1	2	2	33	35	4	7	6	8	4	5
14	68	314	396	265	183	70	18	7	1	3	3	7	7	18	9	3	1	11	15
12	290	1,164	1,510	1,077	865	314	101	62	2	5	1	218	87	34	39	29	29	53	57
1	29	142	183	132	103	60	24	2	1	2	2	3	3	8	2	2	2	5	3
5	8	32	40	33	27	14	5	1	1	1	1	1	1	8	4	2	2	2	2
4	3	71	55	45	52	11	18	1	2	1	1	1	1	4	1	1	1	1	2
4	36	149	182	111	108	46	11	13	1	1	1	18	5	5	2	6	8	3	5
1	50	194	280	209	137	66	26	13	1	1	1	13	7	5	2	6	8	3	5
1	20	91	104	60	47	18	8	6	1	1	1	25	22	1	1	1	1	1	1
1	13	39	55	50	29	13	2	1	1	1	1	14	19	1	1	1	1	1	1
3	10	45	72	43	32	11	4	3	1	1	1	54	36	1	1	1	1	1	1
1	14	35	40	30	24	10	3	2	1	1	1	1	1	1	1	1	1	1	1
3	12	82	103	61	59	29	16	12	1	1	1	13	1	1	1	1	1	1	1
1	29	112	140	106	89	30	10	10	1	1	1	12	6	16	9	2	3	4	2
1	11	45	73	72	48	21	9	2	1	1	1	8	1	1	1	1	1	1	1
9	21	112	128	98	78	28	12	4	1	2	1	8	9	1	1	1	1	1	1
3	19	47	57	45	38	19	9	2	1	1	1	7	3	1	1	1	1	1	1
2	11	61	104	97	80	39	10	7	1	1	1	12	5	7	9	7	6	3	3
1	35	173	278	242	167	68	20	8	1	1	1	1	1	1	1	1	1	1	1
5	14	45	50	37	29	15	6	2	1	1	1	7	7	8	3	1	1	1	1
7	39	173	255	187	141	72	22	8	1	1	1	20	9	8	3	1	1	1	1
1	74	262	338	235	179	74	27	27	1	1	1	25	16	11	5	4	2	4	6
3	50	110	104	103	63	41	4	8	1	1	1	24	51	1	3	9	5	1	1
1	16	98	150	103	84	24	15	13	1	1	1	1	1	1	1	1	1	1	1
5	12	44	49	35	33	14	6	4	1	1	1	31	23	9	8	9	7	3	4
4	39	179	237	181	142	55	18	9	1	1	1	37	32	6	6	10	8	2	2
1	19	68	104	95	69	32	11	4	1	1	1	15	14	1	1	1	1	1	1
6	8	23	25	18	13	5	4	2	1	1	1	22	24	1	1	1	1	1	1
1	6	10	15	19	14	4	2	1	1	1	1	1	1	1	1	1	1	1	1
1	36	216	307	233	188	97	28	9	1	1	1	39	37	10	4	3	5	4	2
1	28	108	141	88	67	33	5	6	1	1	1	31	27	5	1	1	1	1	1
7	7	35	46	37	28	4	2	2	1	1	1	9	7	2	1	1	1	1	1
1	24	121	189	139	92	55	22	8	1	2	2	39	38	6	3	1	1	1	2
7	40	140	166	121	96	42	16	6	1	1	1	6	4	6	4	4	2	1	2
1	9	38	50	36	19	8	6	1	1	1	1	2	2	2	1	1	1	1	1
5	96	486	690	546	415	172	46	12	1	4	4	47	24	32	20	16	16	16	12
1	13	44	60	53	40	18	4	3	1	1	1	3	5	4	3	1	1	1	1
2	84	333	437	295	227	102	26	15	1	1	1	53	26	11	11	7	13	13	7
1	39	189	225	130	91	36	5	5	1	1	1	4	4	1	1	1	1	1	1
1	10	37	51	34	17	9	3	3	1	1	1	12	14	1	1	1	1	1	1
3	25	123	165	118	98	50	24	13	1	1	1	16	11	9	5	1	1	2	5
1	12	58	62	36	36	19	7	1	1	1	1	6	5	2	1	1	1	1	1
6	70	322	401	285	229	102	47	17	1	1	1	9	2	12	7	5	9	12	8
2	9	53	62	53	45	17	9	5	1	1	1	46	50	6	1	4	4	1	1
1	28	114	175	134	103	56	16	9	2	2	2	15	10	12	6	2	2	1	1
2	13	104	131	89	73	31	9	2	1	1	1	5	6	1	6	2	2	1	1
260	3,117	13,262	17,368	12,689	9,815	4,406	1,569	787	23	96	17	1,799	1,424	480	320	346	361	267	264

TABLE A.

Deaths by Counties, Year Ending September 30, 1892.

COUNTIES.	1891.			1892.								Total.	
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.		September.
Adams	2	4	12	9	4	..	5	4	5	3	4	1	53
Allen	44	95	25	77	49	53	65	52	50	71	56	51	621
Bartholomew	30	17	22	48	21	29	18	11	15	26	14	28	279
Benton	3	2	4	..	11	9	2	..	1	3	4	5	44
Blackford	2	2	9	3	7	7	4	2	2	4	9	2	49
Boone	24	11	8	22	13	6	11	11	2	21	8	3	140
Brown	7	3	4	13	3	1	2	4	3	4	..	10	56
Carroll	12	6	5	25	8	5	16	19	9	7	10	8	110
Cass	30	25	25	20	24	24	19	20	21	24	19	10	278
Clark	8	13	23	31	14	18	14	13	9	8	12	5	168
Clay	5	8	9	27	6	10	18	19	7	7	5	13	134
Clinton	9	2	9	14	15	30	8	13	20	18	13	27	171
Crawford	16	12	16	4	4	7	9	3	6	8	6	8	83
Daviess	13	16	17	36	19	1	21	14	10	17	22	18	210
Dearborn	15	12	20	14	10	16	10	9	10	8	4	8	136
Decatur	11	8	5	32	11	12	13	10	5	11	6	8	132
DeKalb . . . . .	..	..	..	3	15	30	..	..	..	13	6	2	46
Delaware	24	18	24	33	23	30	26	17	16	15	15	15	269
Dubuque	19	8	16	37	22	11	7	11	13	13	13	6	175
Elkhart	71	67	50	74	44	31	23	19	23	16	18	16	457
Fayette	7	10	12	18	4	5	6	7	4	6	8	5	87
Floyd	26	10	7	12	13	4	30	20	13	28	2	8	177
Franklin	11	6	2	18	4	4	12	4	9	4	7	6	87
Franklin	6	4	..	9	5	3	6	3	3	4	2	4	54
Fulton	4	11	9	5	11	0	6	4	8	8	2	5	73

TABLE A—Continued.

COUNTIES.	1891.			1892.								Total.	
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.		September.
Ripley	4	5	1	30	11	7	17	4	3	16	5	1	104
Rush	24	8	9	20	16	9	7	9	3	18	9	7	133
Scott	2	1	4	8	13	2	19	14	9	2	11	2	22
Shelby	23	16	4	35	13	17	13	1	10	27	12	14	206
Spencer	3	5	...	28	10	5	13	1	10	12	12	13	109
Starks	7	5	4	1	1	6	1	...	...	4	5	...	34
Steuben	18	5	15	8	26	22	16	26	18	18	18	...	60
St. Joseph	24	16	25	54	4	4	3	7	3	5	7	25	287
Sullivan	8	7	6	16	4	3	2	1	1	6	3	2	69
Switzerland	5	2	4	5	6	3	2	5	1	6	3	2	40
Tippecanoe	12	22	14	25	13	13	15	5	12	14	15	13	173
Tipton	6	1	5	8	9	6	7	3	3	8	11	4	68
Union	1	2	6	7	1	1	2	2	1	...	1	4	29
Vanderburgh	98	80	50	164	75	119	81	69	52	104	62	81	1,025
Vermillion	4	2	5	6	2	6	6	4	4	3	2	4	48
Vigo	45	45	64	82	64	66	64	70	31	69	57	53	710
Wabash	2	6	15	11	4	5	14	9	5	13	6	6	96
Warren	6	3	6	4	...	...	1	2	4	6	1	6	39
Warrick	7	3	15	17	5	2	10	9	9	13	10	11	111
Washington	4	4	3	7	3	4	5	1	1	5	1	2	41
Wayne	38	34	70	79	31	45	49	41	33	54	45	43	562
Wells	4	14	9	4	6	9	8	10	10	5	12	21	110
White	13	8	10	5	8	19	15	6	5	4	9	13	114
Whitley	5	5	17	9	17	4	15	6	5	5	7	8	76
Total	1,448	1,165	1,289	2,407	1,509	1,489	1,488	1,174	1,010	1,457	1,249	1,331	16,836

TABLE B.

Causes of Death by Months, Sex and Color, Year Ending September 30, 1892.

CLASS ONE—ZYMOTIC DISEASES.	1891.				1892.									WHITE.		COLORED.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.		
ORDER ONE—MIASMATIC.																		
Chill, congestive.	2	1	1	2	1	1		1	23	205	2	109	8	2	1	12		
Cholera infantum	71	16	4								167	3	304	277	8	17	604	
Cholera morbus	31	1								10	7	13	136	124	4	26	287	
Croup	31	30	34	51	28	23	27	1	14	7	19	15	46	28	3	74		
Diphtheria	9	6				6			56	40	42	68	384	406	17	818		
Dysentery	110	102	77	108	70	61	45	41	32	73	29	54	97	106	6	213		
Erysipelas	27	7	2	8	6	6	1	6	3	25	23	19	55	35	1	91		
Enterocolitis	10	4	2	15	10	11	15	4	1	2	8	3	49	41	3	90		
Fever, bilious	2		6							2	2					6		
Fever, catarrhal		4	3	6	2	5	9						12	19	32	3		
Fever, cerebro-spinal	10	10	1	7	3	22	35	22	13	9	1	6	87	54	7	151		
Fever, intermittent	2															6		
Fever, malarial	11	5	3	5	2	3		7		7	11	11	31	35	4	71		
Fever, pernicious	1	1								1	6	8	4	8	1	8		
Fever, puerperal	1	1		11	8	1	13	1	8	1	2	2	8	10		83		
Fever, remittent	5	2	7	24	25	25	13	16	12	7	3	4	95	85	2	20		
Fever, scarlet	17	19	15	51	25	27	33	19	14	39	51	95	314	280	13	180		
Fever, typhoid	129	89	59	61	25	27	27	33	19	77	3	13	26	27	8	625		
Fever, typho-malarial	8	4	2	2	2	1	3	2	2	7	3	1	17	10	20	55		
Gangrene	11	1	2	4	2	4	2	2	1	15	3	3	496	623	13	1,152		
La Grippe	11	21	136	477	228	106	91	37	25	15	1	3	18	16	2	38		
Measles	8					10	12	5	2	1			12	12	2	2		
Peritonitis, puerperal						1	7						34	48	2	3		
Pertussis	5	6	3	5	2	1	10	9	7	14	5	7	64	56	1	87		
Pyæmia	12	9	6	15	17	15	13	10	12	7	7	4	89	39	4	125		
Septicæmia, puerperal	1	3	1	2	2	5	4	5					1		1	40		
Small-pox				1												1		
Total	496	346	367	800	452	346	335	240	182	447	461	444	2,307	2,442	75	92	4,916	

TABLE B—Continued.

CLASS ONE—ZYMOTIC DISEASES.	1891.			1892.									WHITE.		COLORED.		Total.	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.		
ORDER TWO—ENTERIC.																		
Syphilis	1	1	2	2	8	3	2	2	3	2	4	4	12	17	4	1	34	
Total	1	1	2	2	8	3	2	2	3	2	4	4	12	17	4	1	34	
ORDER THREE—DIETIC.																		
Delirium tremens	1	...	...	...	...	1	...	2	1	1	...	...	6	...	...	...	6
Eosena. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	6
Inanition.	41	23	26	32	26	25	16	19	11	44	38	39	179	147	7	12	345	
Intemperance	1	1	2	1	2	1	2	1	1	...	2	5	18	...	1	...	19	
Purpura . . . . .	...	...	...	...	...	2	...	1	1	...	...	1	3	...	...	...	6
Total	43	30	28	33	28	29	19	23	14	47	40	48	203	154	8	12	333	
ORDER FOUR—PARASITIC.																		
Thrush	1	...	...	...	...	...	1	2	...	...	1	1	3	3	...	...	6

TABLE B--Continued.

CLASS TWO—CONSTITUTIONAL.	1891.			1892.									WHITE.		COLORED.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.	
ORDER ONE—DIATHETIC.																	
Anaemia	2	2	1	4	1	3	2	4	3	2	33	1	7	18	1	4	25
Cancer	29	22	29	32	25	21	27	35	30	39	17	22	125	214	9	9	344
Dropsy	22	17	18	20	12	19	8	14	16	17	6	11	84	89	9	9	191
Rheumatism	6	4	12	9	11	6	12	13	6	8	6	4	44	51	1	1	97
Total	59	45	60	66	49	49	49	66	55	66	56	38	280	372	11	14	667
ORDER TWO—TUBERCULAR.																	
Hydrocephalus	2	2	2	1	2	2	2	4	2	4	7	4	10	14	2	1	27
Meningitis tubercular	3	2	3	3	4	3	3	4	9	9	7	8	30	31	2	2	63
Phthisis	139	112	126	206	183	194	206	177	140	182	136	167	785	1,006	86	82	1,968
Scrofula	7	10	10	4	4	3	4	2	3	2	3	1	26	18	3	2	49
Tubercles mesenterica	2	1	2	2	2	3	1	2	2	4	3	3	11	13	1	1	25
Total	153	127	143	216	189	206	221	189	166	201	149	183	872	1,032	92	86	2,132

TABLE B—Continued.

CLASS THREE—LOCAL DISEASES.	1891.												1892.												COLORED.		Total.		
	1891.												1892.												WHITE.				
	1891.												1892.												Male.			Fem.	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.													
ORDER ONE—NERVOUS SYSTEM.																													
Apoplexy	31	23	19	34	23	21	19	25	20	14	20	135	128	6	1	370													
Brain abscess	1	1	1	7	16	11	2	2	1	15	1	5	2	4	1	7													
Brain congestion	14	12	13	22	17	21	10	9	15	16	12	73	60	7	8	186													
Brain disease	3	1	2	2	10	8	2	3	27	14	12	54	65	7	8	134													
Brain effusion	8	3	1	2	9	7	2	1	8	10	4	34	33	1	1	69													
Brain fever	4	5	2	5	3	9	4	4	6	5	3	30	18	1	1	45													
Brain softening	6	3	6	10	3	6	8	1	10	5	6	38	37	1	1	75													
Cerebritis	13	20	11	23	18	18	20	12	29	15	24	112	103	8	8	231													
Chorea	4	1	1	3	4	4	3	1	4	4	1	14	11	1	1	25													
Convulsions	4	1	1	3	2	4	2	1	4	1	1	12	6	1	1	18													
Epilepsy	19	16	29	13	15	20	17	20	21	15	15	121	98	7	3	229													
Insanity	5	3	4	3	3	5	3	2	3	2	1	26	12	1	1	40													
Meningitis	2	1	1	1	1	1	1	1	2	1	1	4	2	1	1	6													
Meningitis, cerebral	2	4	2	2	1	2	2	2	1	3	1	6	17	2	2	23													
Meningitis, spinal	2	2	2	2	1	2	2	1	1	2	1	1	4	1	1	7													
Myelitis	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6													
Nervous prostration	2	4	2	2	1	2	2	2	1	3	1	1	6	1	1	23													
Neuralgia	2	2	2	1	1	1	1	1	1	2	1	1	4	1	1	7													
Neurasthenia	2	1	1	1	1	1	1	1	1	2	1	2	6	1	1	16													
Paralysis	38	37	38	58	27	29	30	23	34	14	36	207	190	3	6	393													
Spina biada	2	1	1	1	1	1	1	1	1	2	1	2	5	2	2	8													
Spinal sclerosis	1	1	2	2	1	1	1	1	1	2	1	10	7	2	1	19													
Spine disease	2	2	6	4	5	4	4	2	8	2	3	26	12	1	1	39													
Tetanus	2	2	6	4	3	4	1	2	1	2	1	2	12	1	1	39													
Total	158	152	153	196	148	169	159	140	121	196	121	942	821	42	23	1,833													
ORDER TWO—CIRCULATORY.																													
Congestion	1	3	2	2	3	1	1	9	3	9	2	14	19	1	1	34													
Endocarditis	74	75	77	8	4	4	4	1	1	66	59	499	413	24	19	955													
Heart disease	1	8	4	2	75	83	87	87	3	1	6	17	23	4	4	48													
Hemorrhage	1	8	4	2	7	3	4	1	3	1	1	4	4	2	1	19													
Total	76	86	83	132	89	89	96	98	93	76	67	541	487	28	24	1,060													

TABLE B—Continued.

CLASS THREE—LOCAL DISEASES.	1891.				1892.									WHITE.		COLORED.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Male.	Fem.	Male.	Fem.		
ORDER FIVE—URINARY.																		
Albuminures.....	2	4	1	5	1	1	2	2	1	2	2	1	5	10	5	10	15	
Cystitis.....	4	1	5	9	4	7	9	1	3	3	5	6	43	6	43	49	92	
Diabetes.....	2	6	5	1	1	1	1	5	1	3	5	2	33	17	33	50	83	
Kidneys, disease.....	2	3	5	1	1	1	1	2	2	3	4	3	14	6	14	20	34	
Nephritis.....	22	9	21	11	9	18	12	9	5	9	11	12	55	54	85	139	193	
Nephritis.....	4	6	3	10	6	13	10	10	2	11	7	12	56	56	86	142	202	
Uræmia.....	4	6	1	6	6	1	5	6	5	5	4	2	33	14	33	47	80	
Total.....	43	33	35	43	26	45	47	32	19	30	36	36	269	142	269	142	425	
ORDER SIX—GENERATIVE.																		
Metritis.....	1	2	2	2	2	1	1	1	2	3	1	1	...	12	...	1	13	
Tumor, ovarian.....	1	2	2	...	1	1	2	...	...	1	1	1	...	11	...	1	12
Total.....	2	2	2	2	3	1	3	1	2	4	1	2	...	23	...	2	25	
ORDER EIGHT—INTRODUCTORY.																		
Abscess.....	4	1	1	7	4	2	8	1	3	2	2	4	17	18	2	2	39	
Cellulitis.....	...	3	1	1	1	1	2	1	...	1	...	...	1	7	...	...	8
Tumor.....	5	...	...	2	4	...	2	3	1	3	...	...	10	13	...	...	23
Total.....	9	4	2	10	8	3	12	5	4	6	2	5	28	38	2	2	70	

TABLE B—Continued.

CLASS FOUR—DEVELOPMENTAL DISEASES.	1891.			1892.									WHITE.		COLORED.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.	
ORDER ONE—CHILDREN.																	
Birth, premature	10	2	7	18	16	20	16	18	15	11	18	16	98	61	2	6	167
Cyanosis	3	5		2	8	3	8	4	4	5	4	8	29	21	1	1	52
Malformation	1			2	2	1	3	2	1			1	8	5			13
Malnutrition	3			1	1						2		4	2		1	7
Total	17	7	7	21	27	24	27	24	20	16	24	25	139	89	3	8	239
ORDER TWO—WOMEN.																	
Parturition	2	1		3	2	3	5	4	2	4	3	2		30		1	31
Puerperal eclampsia	2	1		6	4	1	2	1	4	4	4			30		1	31
Total	4	2	2	9	6	4	7	5	6	8	7	2		60		2	62
ORDER THREE—OLD AGE.																	
Old age	27	31	40	70	44	41	34	34	26	47	32	35	201	243	8	9	461
Total	27	31	40	70	44	41	34	34	26	47	32	35	201	243	8	9	461
ORDER FOUR—NUTRITION.																	
Asthenia			1			1	1	1	1		2		6	1			7
Debility	10	17	10	13	10	12	11	9	6	4	5	4	54	53	3	1	111
Exhaustion	6	1	4	5	10	11	15	8	6	10	6	8	41	53		2	97
Marasmus	6	2	3	7	3	6	5	4	3	5	5	9	33	24	1		58
Total	22	20	18	25	23	30	32	27	18	19	18	21	134	131	5	3	273

TABLE B—Continued.

CLASS FIVE—VIOLENCE.	1891.				1892.								WHITE.		COLORED.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Male.	Fem.	Male.	Fem.	
ORDER ONE—ACCIDENTS.																	
Accidents	31	29	28	53	28	23	85	34	39	47	39	45	310	105	10	6	431
Accidents, railroad	12	8	4	3	7	10	10	9	13	4	5	7	48	4	3	...	92
Burn	6	2	3	6	2	3	3	1	4	1	3	1	15	20	...	...	35
Drowning	4	...	1	...	2	1	8	8	23	13	4	2	56	6	2	...	64
Insolation	...	...	...	...	...	...	...	...	2	13	2	2	10	1	...	...	11
Lightning	...	...	...	...	...	...	...	...	3	3	5	1	7	...	...	...	8
Poison	2	1	2	...	5	3	2	3	4	1	2	...	14	11	...	1	26
Shooting	4	4	1	3	4	...	4	4	1	1	4	2	30	1	1	...	32
Total	59	44	39	65	48	50	60	59	89	65	60	61	527	149	16	7	699
ORDER THREE—HOMICIDE.																	
Homicide	...	1	...	1	...	2	2	1	1	1	4	2	14	...	1	...	15
Total	...	1	...	1	...	2	2	1	1	1	4	2	14	...	1	...	15
ORDER FOUR—SUICIDE.																	
Hanging	1	1	...	3	1	1	1	...	1	2	1	...	10	2	...	...	12
Poison	2	2	4	4	...	3	1	3	2	2	...	...	13	12	...	...	25
Shooting	...	...	...	...	2	3	1	1	4	...	1	2	12	2	1	...	16
Suicide	8	5	3	4	6	12	5	6	5	6	1	4	40	22	2	1	65
Total	12	8	7	11	9	19	8	11	12	10	3	8	76	38	3	1	118
Unclassified and unknown	53	47	47	48	30	41	40	40	34	38	39	38	261	221	4	14	500
Total	53	47	47	48	30	41	40	40	34	38	39	38	261	221	4	14	500
RECAPITULATION—																	
Zymotic diseases.	541	377	397	835	488	378	357	267	199	496	506	497	2,530	2,616	87	105	5,338
Constitutional diseases	212	172	203	231	238	254	270	255	211	287	205	221	1,132	1,454	103	100	2,769
Local diseases	482	452	559	1,039	600	596	627	475	398	478	347	387	3,250	2,902	164	146	6,442
Developmental.	70	60	67	125	100	99	100	90	70	90	81	83	474	523	16	22	1,035
Violence	71	53	46	77	57	71	70	71	102	76	67	71	617	187	20	8	832
Unknown and unclassified	58	47	47	48	30	41	40	40	34	38	39	38	261	221	4	14	500
Grand total.	1,434	1,161	1,319	2,105	1,513	1,441	1,464	1,198	1,014	1,445	1,245	1,287	8,264	7,903	394	375	16,936

TABLE C.

Deaths, Showing Nationality and Social Relations, Year Ending September 30, 1892.

CLASS ONE—ZYMOTIC DISEASES.	NATIONALITY.				SOCIAL RELATIONS.								Total.			
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.		NOT REPORTED.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.				Male.	Female.	
ORDER ONE—MIASMATIC.																
Chill, congestive	7	3					5	312	8	4						12
Cholera infantum	311	294	2				294									606
Cholera morbus	12	5	1				6	140	8		3		2		1	26
Group	138	127	1	8	1		126									267
Dysentery	44	26	2				20	15	21	1	4		6		1	74
Diphtheria	372	395	10	2	13	17	390	417	28	23	11	30	8	3	8	818
Erysipelas	92	99	8	7	2	9	80	56	20	2	7					213
Enterocolitis	55	33		3			50	29		4						97
Erysipelas	40	38	5	8	4		22	15	20	17						90
Fever, bilious	3	3					2		2		1					6
Fever, catarrhal	12	19		1			11	13	1	4						32
Fever, cerebro-spinal	89	57			5		88	50	6							151
Fever, intermittent	3	3					2		1	3						9
Fever, malarial	31	31	4	5			15	16	2	13	4					71
Fever, pernicious	4	4					2		3	2						8
Fever, puerperal		74		9	2		4	9	4							83
Fever, remittent	6	11														20
Fever, scarlet	94	83		1	1		93	84	1							20
Fever, typhoid	286	264	30	23	11	11	172	160	135	103	14	25	6	10	8	625
Fever, typho-malarial	25	24	2	3	3		11	12	12	8	4	6	5	2	1	55
Gangrene	13	7	1													27
Ladrippe	429	532	61	76	19	35	113	134	276	252	93	227	27	30		1,152
Measles	20	18					18	17	2	1						38

TABLE C—Continued.

CLASS ONE—ZYMOTIC DISEASES.	NATIONALITY.						SOCIAL RELATIONS.								Total.	
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.			
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.						
ORDER ONE—MIASMATIC.																
Peritonitis puerperal	36	12	7	6	2	1	36	12	29	43	6	5	6	2	12	87
Pertussis	56	53	3	3	2	2	25	12	29	43	6	5	6	2	135	187
Pyæmia	35	35	1	3	2	2	3	3	35	35	2	2	2	2	40	125
Septicæmia puer.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Small-pox	2,178	2,302	139	160	65	72	1,595	1,535	579	608	151	336	57	55	4,916	6,666
Total																
ORDER TWO—ENTHETIC.																
Syphilis	16	17	1	1	1	1	15	10	2	2	1	5	1	1	34	34
Total	16	17	1	1	1	1	15	10	2	2	1	5	1	1	34	34
ORDER THREE—DIETIC.																
Delirium tremens	5	5	1	1	1	1	2	3	2	2	2	1	2	2	6	6
Eczema	2	3	5	5	1	1	2	3	9	10	6	9	1	1	6	6
Inanition	181	157	4	4	1	1	171	139	9	10	6	9	1	1	345	345
Intemperance	14	14	3	3	1	1	2	3	10	10	6	6	2	2	19	19
Purpura	3	3	3	3	1	1	3	3	2	2	2	2	2	2	6	6
Total	205	163	10	1	1	2	180	145	21	10	12	10	3	1	332	332
ORDER FOUR—PARASITIC.																
Thrush	3	3	1	1	1	1	3	2	1	1	1	1	1	1	6	6
Total	3	3	1	1	1	1	3	2	1	1	1	1	1	1	6	6

TABLE C—Continued.

CLASS TWO—CONSTITUTIONAL.	NATIONALITY.						SOCIAL RELATIONS.								Total.
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.		
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.					
ORDER ONE—DIATHETIC.															
Anemia	7	16	..	..	2	..	1	7	4	9	1	2	1	..	25
Cancer	91	154	28	52	7	12	14	20	88	124	18	69	6	5	344
Dropsy	70	73	17	17	6	2	26	17	51	50	12	28	2	5	191
Rheumatism	38	45	6	6	1	1	18	21	23	22	2	8	2	1	97
Total	206	294	51	77	14	15	58	65	166	205	33	105	14	11	657
ORDER TWO—TUBERCULAR.															
Hydrocephalus	12	15	..	..	..	..	12	14	..	1	..	..	..	..	27
Meningitis, tubercular	32	30	..	1	..	..	31	27	1	4	..	..	..	..	63
Phthisis	759	1,001	95	56	26	31	389	394	392	536	58	124	41	34	1,968
Scrofula	28	19	1	..	..	1	23	17	6	3	..	..	..	..	49
Tuberc, mesenterica	11	14	..	..	..	..	6	7	5	7	..	..	..	..	25
Total	842	1,079	96	57	26	32	461	459	404	551	58	124	41	34	2,132

TABLE C—Continued.

CLASS THREE—LOCAL DISEASES.	NATIONALITY.						SOCIAL RELATIONS.						Total.	
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.	MARRIED.		Widower.	Widow.	NOT REPORTED.		
	Male.	Fem.	Male.	Fem.	Male.	Fem.		Male.	Fem.					
ORDER ONE—NERVOUS.														
Apoplexy	110	94	23	29	8	6	14	11	92	57	32	58	3	3
Brain, abscess	5	2	..	..	..	..	4	1	1	7	..	..	..	..
Brain, congestion	79	58	4	2	..	..	58	46	12	7	3	6	3	1
Brain, disease	50	62	10	6	1	5	38	41	17	15	5	13	1	4
Brain, effusion	6	..	..	..	..	..	..	..	2	1	1	..	..	..
Brain fever	32	33	2	1	1	1	29	32	4	1	1	..	1	..
Brain, softening	29	13	1	2	..	..	2	2	17	1	10	8	1	..
Cerebritis	36	37	2	..	..	..	31	24	5	6	2	2	..	..
Chorea	2	4	..	..	..	..	4	..	..	..	..	..	..	..
Convulsions	117	106	3	3	2	2	115	104	5	6	..	..	..	..
Epilepsy	10	9	3	2	1	..	7	7	7	4	1	..	2	..
Insanity	9	3	2	1	..	..	4	..	7	3	..	..	..	..
Meningitis	123	98	3	3	2	3	115	85	8	13	4	1	1	..
Meningitis cerebral	25	13	..	..	2	..	24	12	2	1	1	..	1	..
Meningitis spinal	13	7	..	..	..	..	13	17	2	..	..	..	..	..
Myelitis	2	2	2	2	..	..	1	1	..	..	1	..	..	..
Nervous prostration	5	12	1	2	..	..	2	4	4	10	..	3	6	..
Neuralgia	1	6	..	..	..	..	1	..	..	3	..	..	..	..
Neurasthenia	4	4	..	1	..	1	..	..	8	3	4	3	..	..
Paralysis	170	162	34	20	6	4	30	18	138	70	35	86	7	12
Spina bifida	2	5	..	..	..	..	2	5	3	..	..	..	..	..
Spinal sclerosis	5	3	..	..	..	..	1	3	2	..	1	..	1	..
Spine disease	12	7	..	..	..	..	7	5	4	2	..	..	1	..
Tetanus	25	11	1	1	1	..	23	9	4	3	..	2	..	..
Total	863	757	95	69	28	23	526	425	335	213	101	190	22	21
ORDER TWO—CIRCULATORY.														
Congestion	13	19	..	1	1	..	8	13	6	5	..	2	..	..
Endocarditis	10	11	..	1	..	..	6	..	4	7	1	5	..	..
Heart disease	413	360	85	53	25	19	111	79	296	202	94	135	22	16
Hemorrhage	17	19	1	3	3	8	5	8	9	10	4	8	3	1
Total	453	409	87	60	29	22	130	100	315	224	99	150	25	17
Total	1,316	1,166	182	129	57	45	656	525	650	437	200	340	47	38

ORDER THREE—RESPIRATORY.

ORDER THREE—RESPIRATORY.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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ORDER FOUR—DIGESTIVE.

Bowels, congestion.	15	15	1	1	1	1	9	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	33
Bowels, disease.	8	10	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	21
Bowels, hemorrhage.	3	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
Bowels, obstruction.	37	23	11	5	2	5	18	11	27	16	5	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	88
Bowels, ulceration.	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
Colitis.	5	6	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	11
Dyspepsia.	8	6	1	1	1	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	11
Enteritis.	70	52	1	8	3	1	54	37	15	18	2	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	135
Gastritis.	41	43	7	7	7	4	21	21	20	24	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	107
Gastro-enteritis.	26	35	1	1	1	1	18	22	8	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	64
Hepatitis.	13	11	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	26
Hernia.	9	10	4	1	3	1	7	4	4	8	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
Intussusception.	8	2	1	2	1	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	14
Jaundice.	9	6	2	2	1	1	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	13
Liver, abscess.	7	4	1	1	1	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	7
Liver, atrophy.	9	4	3	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	18
Liver, cirrhosis.	9	5	2	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	17
Liver, disease.	17	18	5	5	2	2	52	40	12	86	5	6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	47
Liver, congestion.	77	134	8	1	4	1	62	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	231
Peritonitis.	15	18	1	1	1	1	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	16
Stomach, catarrh.	8	7	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	36
Stomach, congestion.	16	18	1	1	1	1	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	16
Stomach, disease.	5	10	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	36
Stomach, hemorrhage.	4	4	1	1	1	1	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	17
Stomach, ulceration.	4	4	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	17
Stomatitis.	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19
Tonsillitis.	11	14	2	1	1	1	11	13	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10
Typhlitis.	8	4	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	28
Total	435	469	56	46	19	16	263	211	202	226	34	82	12	1042	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987

TABLE C—Continued.

CLASS THREE—LOCAL DISEASES.	NATIONALITY.				SOCIAL RELATIONS.								Total.		
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.		NOT REPORTED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.					
ORDER ONE—NERVOUS.															
Apoplexy	110	94	23	29	8	6	14	11	92	57	32	58	3	3	270
Brain, abscess	5	2	4	6	2	1	4	1	12	15	3	6	1	1	7
Brain, congestion	79	58	10	6	2	5	58	46	17	15	5	13	3	4	136
Brain, disease	50	62	1	2	1	1	38	41	2	1	1	1	1	1	134
Brain, effusion	6	1	1	2	1	1	3	32	4	1	1	1	1	1	7
Brain fever	32	33	1	2	1	1	29	2	17	6	10	8	1	1	69
Brain, softening	23	13	1	2	1	1	2	2	4	5	2	2	1	1	45
Cerebritis	36	37	2	3	1	1	31	24	5	6	2	2	1	1	75
Chorea	2	4	3	3	1	2	2	4	5	5	1	1	1	1	6
Convulsions	117	106	3	3	1	2	115	104	5	6	1	1	1	1	231
Epilepsy	10	9	3	2	1	1	7	7	6	4	1	1	1	1	25
Insanity	9	3	3	1	2	1	4	4	7	3	1	1	2	1	18
Meningitis	123	98	3	1	2	3	115	85	8	13	4	3	1	1	229
Meningitis cerebral	25	13	1	1	2	1	24	12	2	1	1	1	1	1	40
Meningitis spinal	13	7	2	2	1	1	13	1	1	1	1	1	1	1	20
Myelitis	2	2	1	2	1	1	1	1	2	10	1	3	1	1	23
Nervous prostration	5	6	1	1	1	1	2	4	3	3	4	3	1	1	27
Neuralgia	1	6	1	1	1	1	1	1	1	8	4	3	1	1	16
Neurasthenia	4	6	1	1	1	1	30	18	138	70	35	86	7	12	397
Paralysis	170	162	34	20	6	4	2	3	2	2	1	1	1	1	387
Spina blida	5	5	1	1	1	1	2	3	2	2	1	1	1	1	8
Spinal sclerosis	5	3	1	1	1	1	7	2	4	3	1	1	1	1	19
Spine disease	12	7	1	1	1	1	7	2	4	2	1	1	1	1	19
Tetanus	25	11	1	1	1	1	23	7	4	3	1	2	1	1	39
Total	863	757	95	69	26	23	526	425	335	213	101	190	22	21	1,833
ORDER TWO—CIRCULATORY.															
Congestion	13	19	1	1	1	1	8	13	6	5	1	2	1	1	34
Endocarditis	10	11	1	1	1	1	6	7	4	7	1	1	1	1	34
Heart disease	413	360	85	53	25	19	111	79	296	202	94	138	22	16	865
Hemorrhage	17	19	1	5	3	3	5	8	9	10	4	8	3	1	48
Total	453	409	87	60	29	22	130	100	315	224	99	150	25	17	1,060

ORDER THREE—RESPIRATORY.

Athama.	25	36	10	7	2	1	9	10	19	316	121	205	30	12	1,987
Bronchitis.	104	123	16	20	8	1	77	76	38	29	12	34	1	5	3
Oatarrh.	4	6	3	1	1	1	5	1	6	1	1	2	1	1	3
Haemoptysis.	16	6	1	1	1	1	13	6	4	1	1	1	1	1	5
Laryngitis.	4	4	1	1	1	1	2	3	3	6	4	1	1	1	1
Lungs, abscess.	42	32	17	1	1	6	26	24	20	6	4	8	1	1	1
Lungs, congestion.	7	3	2	1	1	1	3	3	3	4	1	1	1	1	1
Lungs, disease.	5	3	3	1	1	1	3	1	4	2	1	1	1	1	1
Lungs, emphysema.	5	3	3	1	1	1	3	1	4	2	1	1	1	1	1
Pleuritis.	616	548	90	63	23	25	323	249	286	243	88	131	26	14	1,365
Pneumonitis, broncho.	6	10	1	1	1	1	2	7	5	5	2	3	1	1	17
Pneumonitis, catarrhal.	12	16	1	1	1	1	6	8	5	6	2	3	1	1	23
Pneumonitis, pleuro.	4	9	1	1	1	1	2	2	2	2	1	2	1	1	14
Pneumonitis, typho.	8	9	1	1	1	1	4	7	5	2	1	2	1	1	13
Total	870	819	135	94	35	34	488	402	401	316	121	205	30	24	1,987
ORDER FOUR—DIGESTIVE.															
Bowels, congestion.	15	15	1	1	1	1	9	7	7	5	1	4	1	1	33
Bowels, disease.	8	10	1	2	1	1	7	8	2	3	1	1	1	1	21
Bowels, hemorrhage.	3	7	1	1	1	1	2	4	3	3	5	1	1	1	12
Bowels, obstruction.	37	28	11	5	2	5	18	11	27	16	5	11	1	1	88
Bowels, ulceration.	5	2	1	1	1	1	1	3	2	1	1	1	1	1	7
Colitis.	5	6	1	1	1	1	5	5	2	1	1	1	1	1	11
Dyspepsia.	8	6	1	1	1	1	6	1	2	1	1	4	1	1	14
Enteritis.	70	52	1	8	3	1	54	37	15	18	2	5	3	1	135
Gastritis.	41	48	1	7	1	4	21	21	20	24	4	12	2	2	107
Gastro-enteritis.	26	35	1	2	1	1	18	22	8	11	1	4	1	1	64
Hepatitis.	13	11	1	1	1	1	5	1	8	8	1	2	1	1	26
Hernia.	9	10	4	1	3	1	4	2	5	5	1	3	1	1	23
Intussusception.	8	2	1	2	1	1	7	6	4	6	1	3	1	1	14
Jaundice.	9	6	2	1	1	1	4	1	6	2	1	1	1	1	20
Liver, abscess.	7	4	1	1	1	1	2	1	1	2	1	1	1	1	13
Liver, atrophy.	3	3	1	1	1	1	3	1	1	2	1	1	1	1	7
Liver, cirrhosis.	9	6	2	2	1	1	1	1	1	5	1	1	1	1	18
Liver, congestion.	5	5	1	1	1	1	3	1	1	6	1	1	1	1	6
Liver, disease.	17	18	5	5	2	2	8	6	12	5	1	6	1	2	47
Peritonitis.	77	134	8	6	4	2	52	40	28	86	5	11	4	5	251
Stomach, catarrh.	8	7	1	1	1	1	4	4	9	3	4	3	1	1	16
Stomach, congestion.	16	18	1	1	1	1	8	11	4	6	1	4	1	1	96
Stomach, disease.	5	10	2	1	1	1	2	3	5	4	1	1	1	1	17
Stomach, hemorrhage.	4	1	1	3	1	1	1	1	6	1	1	1	1	1	19
Stomach, ulceration.	4	7	2	1	1	1	3	1	4	1	1	1	1	1	10
Stomatitis.	11	14	2	1	1	1	11	13	1	1	1	2	1	1	28
Tonsillitis.	4	4	1	1	1	1	3	1	3	1	1	1	1	1	13
Typhilitis.	8	4	1	1	1	1	3	1	6	1	1	2	1	1	13
Total	435	469	56	46	19	16	263	211	202	226	34	82	12	12	1,042

TABLE C—Continued.

CLASS THREE—LOCAL DISEASES.	NATIONALITY.				SOCIAL RELATIONS.								Total.				
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		WIDOWER.			WIDOW.		NOT REPORTED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.		Male.	Fem.	Male.	Fem.
ORDER FIVE—URINARY.																	
Albuminuria	4	10	1	1	1	1	1	5	2	4	3	11	4	1	1	15	
Cystitis	33	15	1	1	1	1	10	5	23	2	2	11	7	2	2	49	
Diabetes	34	14	1	2	1	1	4	5	22	5	3	2	4	1	1	52	
Kidney disease.	10	4	1	3	1	1	16	12	49	27	21	15	15	3	3	19	
Nephritis	69	51	19	8	1	1	18	11	31	14	19	12	12	1	1	144	
Nephritis	43	23	12	8	1	1	10	8	13	7	12	4	4	1	1	93	
Uræmia	23	14	6	1	1	1	10	3	13	7	12	4	4	1	1	50	
Total	220	123	51	14	8	6	59	39	151	61	61	42	42	8	4	425	
ORDER SIX—GENITIVE.																	
Metritis	11	10	1	2	1	1	1	1	1	12	1	1	4	1	1	13	
Tumor, Ovarian	10	1	1	1	1	1	1	1	1	7	1	1	1	1	1	12	
Total	21	11	2	3	2	2	2	2	2	19	2	2	4	2	2	25	
ORDER EIGHT—INTEGUMENTARY.																	
Abscess	14	19	5	3	1	1	9	9	7	7	2	2	3	1	1	39	
Cellulitis	1	5	1	3	1	1	7	2	1	3	1	1	2	2	2	8	
Tumor	9	10	1	3	1	1	1	1	3	9	1	1	2	1	1	23	
Total	24	34	6	6	3	3	16	12	11	18	2	2	7	1	3	70	

TABLE C—Continued.

CLASS FOUR—DEVELOP- MENTAL DISEASES.	NATIONALITY.						SOCIAL RELATIONS.								Total.				
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.						
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.									
ORDER ONE—CHILDREN.																			
Birth, premature	100	67	..	..	..	..	100	67	..	..	..	..	..	..	..	..	..	167	187
Cyanosis	30	22	..	..	..	..	30	22	..	..	..	..	..	..	..	..	..	52	59
Malformation	8	5	..	..	..	..	8	5	..	..	..	..	..	..	..	..	..	13	13
Malnutrition	4	3	..	..	..	..	4	3	..	..	..	..	..	..	..	..	..	7	7
Total	142	197	..	..	..	..	142	197	..	..	..	..	..	..	..	..	..	239	239
ORDER TWO—WOMEN.																			
Parturition . . . . .	..	29	..	2	..	1	..	1	..	27	..	..	..	..	..	..	..	3	31
Puerperal eclampsia . . . . .	..	29	..	1	..	..	..	3	..	28	..	..	..	..	..	..	..	..	31
Total . . . . .	..	58	..	3	..	1	..	4	..	55	..	..	..	..	..	..	..	3	62
ORDER THREE—OLD AGE.																			
Old age	141	162	58	79	10	11	15	16	86	46	97	181	11	9	..	..	..	461	461
Total	141	162	58	79	10	11	15	16	86	46	97	181	11	9	..	..	..	461	461
ORDER FOUR—NUTRITION.																			
Asthenia	6	1	..	..	..	..	2	1	4	..	..	..	..	..	..	..	..	7	7
Debility	50	46	7	3	..	3	11	8	17	18	21	24	8	4	..	..	..	111	111
Exhaustion	36	47	6	6	..	2	22	19	13	16	6	16	1	1	..	..	..	97	97
Marasmus	30	22	3	2	1	..	26	20	6	2	2	2	2	..	..	..	..	58	58
Total	122	118	16	11	1	5	61	48	40	36	29	42	9	8	..	..	..	273	273

TABLE C—Continued.

CLASS FIVE—VIOLENCE.	NATIONALITY.						SOCIAL RELATIONS.						
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	NOT REPORTED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.			
ORDER ONE—ACCIDENT.													
Accident	255	87	37	7	28	17	156	52	122	33	16	23	26
Accident, railroad	98	4	7	1	13	...	38	2	27	3	2	1	11
Burn	14	20	...	...	...	...	10	13	8	...	...	2	4
Drowning	55	...	...	...	...	...	46	4	8	...	...	1	...
Insolation	6	1	...	...	...	...	6	1	4	...	...	...	...
Lightning	14	1	...	...	...	...	2	...	4	...	...	...	...
Poison	23	12	...	...	...	...	12	7	4	...	...	...	...
Shooting . . . . .	...	1	...	...	...	...	...	1	16	...	2	...	...
Total	446	121	50	7	47	18	278	80	198	41	24	27	43
ORDER THREE—HOMICIDE.													
Homicide	12	...	2	...	1	...	3	...	8	...	2	...	...
ORDER FOUR—SUICIDE.													
Hanging	5	1	3	1	2	...	3	...	6	2	1	...	1
Poison	8	10	4	1	1	...	5	4	7	6	1	2	...
Shooting	13	1	...	...	...	...	5	2	4	...	3	...	...
Suicide	29	17	10	1	3	5	6	10	27	11	5	1	4
Total	55	29	17	3	7	7	9	16	43	19	10	3	7
UNCLASSIFIED.													
Unknown	211	207	32	23	22	6	143	131	69	72	31	22	22
Total													
				</									

RECAPITULATION.													
Zymotic diseases	2,402	2,485	149	161	66	75	1,793	1,692	600	621	164	351	5,338
Constitutional diseases	1,018	1,373	147	134	40	47	519	524	579	756	91	229	2,789
Local diseases	2,967	2,634	490	291	117	103	1,432	1,191	1,418	1,077	418	680	6,412
Developmental diseases	406	486	74	93	11	17	218	166	228	137	126	223	1,035
Violence	515	160	69	10	55	22	300	86	249	60	36	40	832
Unknown and unclassified	211	207	32	22	22	6	143	131	69	72	31	22	600
Grand total	7,446	7,284	901	711	311	273	4,455	3,799	3,029	2,723	866	1,535	16,936

13—Bd. of H.

TAB

Causes of Death, and Grouped Ages,

CLASS ONE—ZYMOTIC DISEASES.	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER ONE—MIASMATIC.														
Chill, congestive	237	216	74	77	1	1	..	..	1	1	2	..	1	1
Cholera infantum	2	..	..	1	..	..	..	..	..	..	1	..	1	1
Cholera morbus	22	22	84	69	31	30	3	1	..	1	..	1	1	1
Croup	13	6	4	5	2	1	..	..	..	..	1	1	..	..
Diarrhoea	19	18	171	156	149	179	41	49	8	7	3	6	1	..
Diphtheria	10	15	32	27	10	7	1	2	2	3	8	1	1	3
Dysentery	31	17	19	12	..	..	..	..	..	1	1	3	9	6
Enterocolitis	9	10	2	1	..	1	1	..	..	1	4	1	..	..
Erysipelas . . . . .	..	7	2	1	..	..	..	1	..	1	1	..	1	1
Fever, bilious	6	..	2	2	1	2	1	..	1	2	9	1	1	..
Fever, catarrhal	25	15	25	18	15	10	7	7	9	2	1	2	1	1
Fever, cerebro-spinal . . . . .	..	..	1	..	..	..	..	..	..	1	3	7	7	3
Fever, intermittent	2	2	1	4	3	4	3	4	1	1	3	7	1	3
Fever, malarial . . . . .	..	..	1	..	..	1	..	1	1	1	..	..	1	..
Fever, pernicious . . . . .	..	..	..	..	..	..	..	..	1	1	..	40	..	29
Fever, puerperal	1	..	2	6	..	..	..	..	1	2	..	..	..	1
Fever, remittent	9	10	59	43	19	24	3	5	2	2	1	..	1	..
Fever, scarlet	3	3	10	13	14	19	21	26	38	44	89	82	71	37
Fever, typhoid	2	1	..	1	1	2	2	2	2	4	7	5	2	4
Fever, typho-malarial . . . . .	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Gangrene	32	32	16	12	13	12	6	5	6	7	25	50	30	38
La Grippe	3	6	13	7	1	1	..	..	..	2	1	..	1	1
Measles . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Peritonitis, puerperal	26	26	9	24	1	1	..	..	..	..	5	..	..	3
Pertussis	7	2	6	1	3	3	2	..	..	5	6	20	6	11
Pyæmia . . . . .	..	..	..	..	..	..	..	..	..	6	..	18	..	10
Septicæmia, puerperal . . . . .	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Small-pox . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	459	409	532	483	254	297	91	103	69	95	162	248	133	141
ORDER TWO—ENTHETIC.														
Syphilis	6	7	3	..	..	1	..	..	..	..	2	2	1	5
Total	6	7	3	..	..	1	..	..	..	..	2	2	1	5
ORDER THREE—DIETIC.														
Delirium tremens . . . . .	..	..	2	..	..	..	..	..	..	..	..	..	4	..
Eczema	155	121	8	9	2	1	1	1	..	1	3	4	1	2
Inanition . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Intemperance . . . . .	..	..	2	1	1	2	..	..	..	..	..	..	..	..
Purpura . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	155	124	12	10	3	3	1	1	..	1	3	4	8	2
ORDER FOUR—PARASITIC.														
Thrush	3	2	..	..	..	..	..	..	..	..	..	1	..	..
Total	3	2	..	..	..	..	..	..	..	..	..	1	..	..

LE D.

Year Ending September 30, 1892.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100		100 and Over.		Not Rept'd.		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	9	3	12
3	..	1	2	5	3	2	1	1	..	..	..	..	..	2	..	312	294	606
2	1	8	..	8	1	4	1	3	7	1	..	..	..	1	2	18	8	26
1	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	140	127	267
3	2	2	11	15	11	18	15	4	7	..	2	..	..	2	6	46	28	74
3	3	5	5	6	6	5	2	3	1	1	..	..	..	5	3	395	423	818
..	1	..	1	..	1	2	..	..	..	..	..	..	..	1	2	102	111	213
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	55	36	91
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	49	41	90
..	1	..	..	..	1	..	3	1	..	..	..	..	..	..	1	3	3	6
..	..	1	..	2	1	..	..	1	1	..	..	..	..	..	1	12	20	32
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	94	57	151
3	1	1	1	2	2	2	6	3	1	..	..	..	..	4	..	3	3	6
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	35	36	71
..	10	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4	4	8
1	..	..	..	2	..	..	..	1	1	..	1	..	..	..	..	..	83	83
27	23	13	19	15	11	9	9	1	..	..	..	..	..	2	12	95	85	180
3	2	1	3	3	3	3	1	2	..	..	..	..	..	16	12	327	298	625
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	27	55
28	47	59	68	79	132	136	151	63	64	6	4	..	1	2	10	10	17	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	509	643	1,152
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	18	38
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	12	24
9	10	8	1	8	4	4	3	4	..	..	..	..	..	2	..	36	51	87
..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65	90	125
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	40	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
84	102	100	111	149	184	189	200	92	83	8	8	..	1	49	59	2,375	2,541	4,916
2	..	1	2	1	1	..	..	..	..	..	..	..	..	..	..	16	18	34
2	..	1	2	1	1	..	..	..	..	..	..	..	..	..	..	16	18	34
..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	6	..	6
..	5	2	3	8	2	3	2	..	1	..	..	..	..	3	3	2	4	9
4	..	7	..	8	..	2	..	..	4	..	1	..	..	..	..	186	159	345
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19	..	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6
4	5	10	3	12	2	5	2	..	5	..	1	..	..	3	3	216	166	382
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6

TABLE

CLASS TWO—CONSTITUTIONAL.	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER ONE—DIATHETIC.														
Anæmia.	1	3	..	2	..	..	1	1	..	1	..	2	1	2
Cancer. . . . .	..	1	..	..	2	2	2	2	3	3	3	6	8	34
Dropsy	3	..	4	..	2	2	7	3	3	3	3	6	3	12
Rheumatism	1	1	..	1	4	2	3	4	6	5	6	5	2	6
Total	5	5	4	3	6	5	6	11	9	9	12	19	14	54
ORDER TWO—TUBERCULAR.														
Hydrocephalus	9	10	2	4	1	..	..	..	..	..	1	1	..	..
Meningitis, tubercular . .	12	7	11	16	3	2	1	1	1	..	1	4	..	..
Phthisis	18	18	20	18	10	19	19	31	63	111	234	379	196	213
Scrofula	9	10	7	2	4	1	1	2	2	1	..	3	1	1
Tabes mesenterica	3	..	1	3	1	1	1	1	..	1	..	2	2	2
Total	51	45	41	43	19	23	22	35	66	113	235	389	199	216

D—Continued.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		100 and Over.		Not Rep'd.		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
1	15	27	3	2	3	2	1	10	8	2	2	7	1	7	7	7	18	25
5	7	5	8	16	32	21	25	8	10	1	1	1	1	1	1	126	218	344
3	7	5	7	10	5	4	3	4	4	1	1	1	1	1	1	93	98	191
																45	52	97
26	66	52	68	58	60	52	43	18	22	4	1	9	16	271	386			657
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	15	27
107	105	75	66	71	59	37	28	3	6	6	2	27	35	880	1,088	32	31	63
1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	29	20	49
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	14	25
110	106	77	68	75	60	37	39	3	6	1	1	29	35	964	1,168			2,132

TABLE

CLASS THREE—LOCAL DISEASES.	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER ONE—NERVOUS.														
Apoplexy	2	1	2	1	1	..	..	..	2	6	2	6	6	6
Brain, abscess	3	..	..	1	..	..	..	..	1	2	..	..	1	3
Brain, congestion	32	21	11	16	6	1	1	3	3	2	4	..	1	3
Brain, disease	17	11	11	12	3	6	1	..	1	5	6	6	..	6
Brain, effusion	2	..	..	..	..	..	..	..	..	1	1	1	1	..
Brain, fever	11	13	8	11	3	2	3	1	..	3	2	2	1	..
Brain, softening . . . . .	..	1	..	..	..	..	..	..	..	2	2	1	1	1
Cerebritis	13	13	7	10	4	1	3	3	1	1	4	3	1	2
Chorea . . . . .	..	..	..	..	..	..	1	1	..	1	1	1	..	..
Convulsions	96	68	12	30	1	2	..	1	..	4	2	2	2	3
Epilepsy	1	..	..	1	..	..	..	..	2	1	3	5	..	3
Insanity . . . . .	..	..	..	..	..	..	..	..	1	1	1	1	1	..
Meningitis	39	33	51	27	11	13	3	4	7	4	3	4	1	10
Meningitis, cerebral	9	2	11	7	3	1	1	1	..	1	3	1	..	..
Meningitis, spinal	4	2	3	3	2	1	1	..	2	1	..	..	..	..
Myelitis . . . . .	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Nervous prostration . . . . .	..	1	..	..	..	1	..	..	..	..	..	1	1	3
Neuralgia . . . . .	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Neurasthenia . . . . .	..	..	..	..	..	..	..	..	..	1	1	..	..	..
Paralysis	3	2	5	2	3	6	..	..	1	1	5	6	9	7
Spina bifida	2	5	..	..	..	..	..	..	..	..	..	..	..	..
Spinal sclerosis . . . . .	..	..	..	..	..	..	..	..	..	..	3	1	1	..
Spine disease	1	1	3	1	1	..	1	1	..	1	1	2	1	1
Tetanus	10	5	..	..	1	1	5	..	4	..	2	3	1	1
Total	245	179	124	121	40	34	18	15	23	26	42	46	32	46
ORDER TWO—CIRCULATORY.														
Congestion	1	1	3	3	1	5	..	1	..	..	6	2	1	2
Endocarditis . . . . .	..	..	..	..	2	..	1	..	1	1	..	..	..	..
Heart disease	23	11	5	2	12	13	9	11	7	1	27	30	29	57
Hemorrhage	1	..	3	1	1	..	1	..	..	..	1	2	1	7
Total	25	13	8	8	16	19	10	13	10	8	30	37	33	67
ORDER THREE—RESPIRATORY														
Asthma . . . . .	..	1	..	..	2	..	2	..	2	3	8	5	3	3
Bronchitis	44	44	23	22	2	2	1	2	1	2	3	6	4	7
Catarrh	1	..	1	..	1	..	..	1	..	..	1	1	1	1
Haemoptysis . . . . .	..	1	2	..	..	1	..	..	..	..	2	2	3	..
Laryngitis	5	2	3	1	2	2	2	..	..	1	1	..	1	..
Lungs, abscess . . . . .	..	..	1	1	1	..	..	..	2	..	..	..	..	..
Lungs, congestion	15	7	5	9	..	1	1	..	1	..	4	5	2	3
Lungs, disease	1	..	..	..	..	..	..	..	..	..	2	2	1	2
Lungs, emphysema . . . . .	..	..	..	..	1	..	1	..	..	1	..	..	..	..
Pleuritis . . . . .	..	2	1	..	1	..	1	..	..	..	1	2	1	1
Pneumonitis	112	73	82	59	24	21	13	25	27	22	46	62	56	55
Pneumonitis, broncho . . . . .	..	2	1	2	1	..	..	..	..	..	2	2	1	1
Pneumonitis, catarrhal	5	5	2	3	..	..	..	..	..	..	2	2	1	2
Pneumonitis, pleuro . . . . .	..	1	1	1	..	..	1	..	1	..	1	1	1	1
Pneumonitis, typho	1	..	1	3	1	..	..	4	1	..	2	..	1	1
Total	184	137	121	101	33	28	19	33	30	30	65	92	79	77

D—Continued.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		100 and Over.		Not Rept'd.		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
14	16	14	21	42	37	33	28	17	11	1	..	..	..	3	4	141	129	270
2	4	1	1	5	2	4	..	..	..	..	..	..	..	1	1	5	2	7
4	5	7	7	9	7	2	6	2	3	..	1	..	..	1	1	76	60	136
1	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	61	73	134
4	1	..	..	..	..	1	..	..	..	..	..	..	..	2	1	6	1	7
4	3	6	3	13	3	..	4	..	..	2	..	..	..	2	..	35	34	69
2	2	1	1	2	..	1	1	..	..	..	..	..	..	2	..	30	15	45
2	2	..	..	..	..	2	..	..	..	..	..	..	..	2	..	38	37	75
2	2	..	..	1	..	2	..	..	..	..	..	..	..	2	..	2	4	6
1	1	2	1	2	..	2	..	..	..	..	..	..	..	..	..	120	111	231
5	1	2	2	3	1	..	..	..	1	..	..	..	..	..	..	14	11	25
3	3	3	1	1	..	2	..	..	..	..	..	..	..	4	2	13	5	18
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	128	101	229
..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	27	13	40
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	13	7	20
..	..	..	..	2	..	..	1	1	..	..	..	..	..	..	..	4	2	6
..	..	3	1	2	3	2	4	..	..	..	..	..	..	..	..	6	17	23
..	..	1	2	2	..	2	..	1	..	..	..	..	..	..	..	1	6	7
1	1	..	..	1	..	2	2	1	..	1	..	..	..	1	..	8	8	16
26	9	28	25	47	53	60	38	16	26	2	3	..	..	5	9	210	186	396
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	7
..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	5	3	8
..	..	1	..	1	..	2	..	..	..	..	..	..	..	1	..	12	7	19
2	1	..	..	..	1	..	..	..	..	..	..	..	..	2	..	27	12	39
71	52	76	70	135	110	111	86	38	42	5	5	..	..	24	17	984	849	1,833
1	1	..	1	3	1	2	..	..	..	..	..	..	..	1	..	14	20	34
45	53	90	51	105	81	111	77	32	24	5	1	..	..	21	14	11	12	23
3	1	6	4	2	6	2	..	..	1	..	..	..	..	2	1	523	432	955
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21	27	48
49	56	96	59	115	90	116	80	32	25	5	1	..	..	24	15	569	491	1,060
1	4	10	5	7	10	10	9	1	2	..	..	..	..	..	..	37	44	81
4	3	8	6	12	17	17	20	8	10	..	..	..	..	1	2	128	144	272
3	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	4	2	6
..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	12	6	18
..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	17	6	23
1	2	2	1	..	..	..	..	..	..	..	..	..	..	..	..	5	4	9
2	3	4	1	11	3	3	3	..	3	1	1	..	..	3	..	50	39	89
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	7	7	14
1	1	..	..	1	1	2	2	1	1	..	..	..	..	..	..	7	4	11
80	48	66	79	101	73	78	72	26	26	1	2	..	..	1	..	12	9	21
..	..	..	..	..	..	1	3	2	2	..	..	..	..	..	..	729	636	1,365
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	10	17
..	1	1	1	1	2	1	..	..	..	..	..	..	..	..	1	12	17	29
..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	4	9	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	9	18
93	62	93	93	137	110	120	112	40	46	2	3	..	1	24	22	1,040	947	1,987

TABLE

CLASS THREE—LOCAL DISEASES.	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER FOUR—DIGESTIVE.														
Bowels, congestion	7	3	2	2	1	2	2	1	1	5	2	1	2	1
Bowels, disease	1	2	2	2	2	2	1	1	2	2	2	2	2	2
Bowels, hemorrhage	4	3	2	3	2	1	3	1	3	2	3	4	1	1
Bowels, obstruction	2	3	2	2	1	1	1	1	1	1	1	1	1	1
Bowels, ulceration	2	3	2	2	1	1	1	1	1	1	1	1	1	1
Colitis	6	11	13	9	3	3	3	1	3	3	4	9	1	1
Dyspepsia	25	7	13	6	3	2	3	1	3	3	4	9	2	2
Enteritis	7	5	4	7	1	1	1	1	1	1	2	2	2	2
Gastritis	10	13	5	7	1	1	1	1	1	1	2	2	2	2
Gastro enteritis	2	1	2	2	1	1	1	1	1	1	2	2	2	2
Hepatitis	1	2	2	2	1	1	1	1	1	1	2	2	2	2
Hernia	2	2	2	2	1	1	1	1	1	1	2	2	2	2
Intussusception	3	6	2	2	1	1	1	1	1	1	2	2	2	2
Jaundice	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Liver, abscess	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Liver, atrophy	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Liver, cirrhosis	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Liver, congestion	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Liver, disease	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Peritonitis	7	8	2	5	8	4	8	7	12	11	16	48	9	33
Stomach, catarrh	2	2	2	2	1	1	1	1	1	1	2	2	2	2
Stomach, congestion	5	2	2	2	1	1	1	1	1	1	2	2	2	2
Stomach, disease	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stomach, hemorrhage	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stomach, ulceration	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stomatitis	3	2	3	3	3	3	1	4	2	2	1	1	1	1
Tonsillitis	3	2	4	4	3	3	1	4	2	2	1	1	1	1
Typhlitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	97	67	38	46	25	18	26	14	25	26	46	87	36	59
ORDER FIVE—URINARY.														
Albuminuria	1	1	1	1	1	1	1	1	1	1	2	1	2	1
Cystitis	2	1	1	1	2	1	1	1	3	1	1	6	1	1
Diabetes	1	1	1	1	1	1	1	1	1	1	1	1	2	2
Kidneys, disease	1	4	1	1	1	1	1	1	1	1	12	5	9	8
Nephria	2	1	3	4	2	1	2	2	1	2	5	2	2	1
Nephritis	1	1	3	4	1	1	1	1	1	1	5	3	2	2
Uræmia	1	1	1	1	1	1	1	1	1	1	5	3	2	2
Total	7	7	4	11	3	3	3	4	9	4	22	13	21	16
ORDER FIVE—GENERATIVE.														
Metritis	1	1	1	1	1	1	1	1	1	1	6	1	3	3
Tumor, ovarian	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	1	1	1	1	1	1	1	1	1	1	6	1	3	3
ORDER EIGHT—INTEGUMENTARY.														
Abscess	3	1	2	2	2	1	1	1	1	1	4	1	2	2
Cellulitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tumor	3	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	6	1	1	4	1	2	1	1	1	1	5	1	6	6

D—Continued.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		100 and Over.		Not Rept'd		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
1	..	3	1	..	1	3	2	..	..	..	..	..	..	1	1	17	16	33
..	1	..	2	..	1	1	1	..	..	..	..	..	..	..	..	9	12	21
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	7	12
..	2	11	3	..	5	9	6	..	1	..	..	..	..	1	1	50	38	88
1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	7
..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	5	6	11
1	1	..	..	..	2	..	..	..	1	..	..	..	..	..	..	8	6	14
2	5	7	5	4	3	5	3	1	5	1	..	..	..	4	4	74	61	135
5	13	5	3	3	9	3	4	..	..	..	..	..	..	1	1	48	59	107
2	2	1	2	3	5	3	1	..	..	..	..	..	..	1	1	27	37	64
3	4	1	1	3	2	1	2	..	..	..	..	..	..	..	..	14	12	26
1	1	..	..	..	4	1	..	2	2	..	..	..	..	1	..	13	10	23
..	1	1	1	..	1	1	2	1	1	..	..	..	..	1	1	12	2	14
..	1	1	1	3	1	..	..	..	..	..	..	..	..	1	..	11	9	20
..	1	1	1	..	2	..	..	..	..	..	..	..	..	..	..	9	4	13
..	1	1	2	..	1	1	1	..	..	..	..	..	..	..	..	4	3	7
..	1	2	..	..	5	4	1	..	..	..	..	..	..	..	..	11	7	18
1	5	1	2	..	1	2	3	1	..	..	..	..	..	..	..	5	1	6
7	11	2	8	6	4	2	3	1	1	1	..	..	..	..	..	24	23	47
1	..	2	2	7	5	1	1	..	..	..	..	..	..	2	3	89	142	231
..	1	1	1	1	4	2	2	..	..	..	..	..	..	..	..	8	8	16
..	1	1	2	1	3	2	1	..	..	..	..	..	..	..	..	17	19	36
..	3	..	..	2	1	..	..	..	..	..	..	..	..	..	..	7	10	17
3	3	3	1	1	..	..	2	1	..	..	..	..	..	..	..	5	2	7
..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	8	11	19
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	4	6	10
2	..	1	1	1	1	1	..	1	..	..	..	..	..	..	..	14	14	28
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	4	13
41	59	53	35	58	64	41	37	8	10	4	1	..	..	14	13	511	531	1,042
1	..	..	..	..	1	3	..	..	..	1	..	..	..	..	..	5	10	15
2	1	4	2	9	5	18	3	9	..	..	..	..	..	..	..	43	16	49
1	1	3	1	3	..	8	3	..	..	..	..	..	..	2	..	35	17	52
9	8	18	8	17	7	17	9	3	1	..	..	..	..	2	..	14	5	19
7	8	11	10	11	4	10	4	2	1	1	1	..	..	1	3	89	55	144
2	2	4	1	6	2	8	2	5	..	..	..	..	..	..	..	58	38	96
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	35	15	50
22	19	41	24	53	19	67	21	20	1	2	1	..	..	4	3	279	146	425
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
..	3	..	2	..	7	..	..	..	..	..	..	..	..	..	..	..	13	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	..
..	4	..	2	..	7	..	..	..	..	..	..	..	..	..	1	..	25	25
2	2	5	1	3	1	..	1	..	1	..	..	..	..	4	1	19	20	39
1	7	..	2	..	1	3	1	..	..	..	..	..	..	1	2	1	7	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	13	23
4	9	5	3	3	2	3	2	..	1	..	..	..	..	5	3	30	40	70

TABLE D—

CLASS FOUR—DEVELOPMENTAL DISEASES.	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER ONE—CHILDREN.														
Birth, premature	100	67	..	..	..	..	..	..	..	..	..	..	..	..
Cyanosis	30	22	..	..	..	..	..	..	..	..	..	..	..	..
Malformation	8	5	..	..	..	..	..	..	..	..	..	..	..	..
Malnutrition	4	2	..	1	..	..	..	..	..	..	..	..	..	..
Total	142	96	..	1	..	..	..	..	..	..	..	..	..	..
ORDER TWO—WOMEN.														
Parturition . . . . .	..	..	..	..	..	..	..	..	1	..	15	..	11	..
Puerperal eclampsia . . . . .	..	..	..	..	..	..	..	..	8	..	16	..	6	..
Total . . . . .	..	..	..	..	..	..	..	..	9	..	31	..	17	..
ORDER THREE—OLD AGE.														
Old age . . . . .	..	..	..	✓	..	..	..	..	..	..	..	..	..	..
Total . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ORDER FOUR—NUTRITION.														
Asthenia . . . . .	..	..	..	..	1	1	..	..	1	..	..	..	..	..
Debility	3	2	2	1	..	..	..	2	..	..	1	1	1	..
Exhaustion	13	9	1	1	..	1	1	..	2	4	6	3	5	..
Marasmus	20	16	5	3	1	..	..	..	1	..	..	..	..	..
Total	36	27	8	5	2	2	1	2	1	3	4	7	4	6

Continued.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		100 or Over.		Not Rept'd.		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100	67	167
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30	22	52
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	142	97	239
..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	31	31
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	31	31
..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	62	62
..	..	..	..	6	11	70	86	100	119	26	26	4	3	3	7	209	252	461
..	..	..	..	6	11	70	86	100	119	26	26	4	3	3	7	209	252	461
..	..	1	..	2	..	1	..	..	..	..	..	..	..	..	..	6	1	7
8	3	3	3	12	9	12	17	11	12	4	2	..	..	1	1	57	54	111
4	3	4	10	3	3	5	9	2	3	..	..	..	..	2	3	42	55	97
..	1	1	..	3	1	4	2	..	..	..	..	..	..	..	..	34	24	58
12	7	9	13	20	13	22	28	13	15	4	2	..	..	3	4	139	134	273

TABLE D—

CLASS FIVE—VIOLENCE	Under 1.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ORDER ONE—ACCIDENT.														
Accident	16	18	15	5	14	8	14	9	32	3	65	11	48	14
Accident, railroad	1	2	6	8	2	4	3	6	1	21	1	25	1	2
Burn	3	1	4	2	3	14	7	1	10	1	4	1	1	1
Drowning	1	1	1	1	1	1	1	1	2	1	1	1	1	1
Insolation	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lightning	6	2	2	1	1	1	2	2	2	1	2	1	1	1
Poison	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Shooting	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	26	23	28	17	20	13	34	9	49	7	106	16	93	17
ORDER THREE—HOMICIDE.														
Homicide	1	1	1	1	1	1	1	1	1	1	2	1	3	1
Total	1	1	1	1	1	1	1	1	1	1	2	1	3	1
ORDER FOUR—SUICIDE.														
Hanging	1	1	1	1	1	1	1	1	1	1	2	1	1	1
Poison	1	1	1	1	1	1	1	1	1	1	6	7	2	1
Shooting	1	1	1	1	1	1	1	1	1	1	4	9	8	1
Suicide	1	1	1	1	1	1	1	1	1	1	4	8	12	5
Total	1	1	1	1	1	1	1	1	2	4	21	15	15	6
Unclassified and unknown	75	65	17	14	8	6	1	7	9	7	13	19	10	21
RECAPITULATION.														
Zymotic Diseases	623	542	547	493	257	301	92	104	69	96	167	255	142	148
Constitutional Diseases	56	50	45	46	25	28	28	46	75	122	247	408	213	270
Local Diseases	564	404	296	291	118	104	76	80	98	97	206	286	201	274
Developmental Diseases	178	123	8	6	2	2	1	2	1	12	4	38	4	23
Violence	26	23	28	17	21	13	35	10	51	11	129	31	111	23
Unknown and unclassified	75	65	17	14	8	6	1	7	9	7	13	19	10	21
Grand Total	1,522	1,207	941	867	431	454	233	249	303	345	766	1037	681	756

Continued.

40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100		100 and Over.		Not Rept'd		Males.	Females.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
37	7	25	3	23	6	11	10	5	8	..	1	..	..	15	8	320	111	431
14	..	9	2	3	..	3	..	..	..	..	..	..	..	2	..	88	4	92
1	1	2	..	2	1	..	1	..	1	..	..	..	..	..	..	15	20	35
2	..	4	1	2	..	1	1	1	..	..	..	..	..	3	..	58	6	64
..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	10	1	11
3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	7	8	8
2	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	14	12	26
6	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	31	1	32
65	8	44	8	33	7	16	12	6	9	1	1	..	..	22	9	543	156	699
4	..	3	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
4	..	3	..	..	..	2	..	..	..	..	..	..	..	..	..	15	..	15
4	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	10	2	12
3	2	1	1	3	..	..	2	..	..	..	..	..	..	1	..	13	12	25
2	1	1	..	..	..	2	..	..	..	..	..	..	..	1	1	14	2	16
8	2	5	2	2	..	3	..	..	..	..	..	..	..	1	1	42	23	65
17	6	8	3	6	..	6	2	..	..	..	..	..	..	3	2	79	39	118
8	16	21	11	18	15	19	13	6	3	..	..	..	..	60	38	265	235	500
90	107	111	116	162	187	194	202	92	88	8	9	..	1	56	79	2,610	2,728	5,338
136	172	129	136	133	120	89	72	21	28	..	..	..	..	38	57	1,235	1,554	2,789
280	256	364	286	501	402	458	538	138	125	18	11	..	1	95	74	3,413	3,029	6,442
12	10	9	13	26	24	92	114	113	134	30	28	4	3	6	13	490	545	1,035
86	14	55	11	39	7	24	14	6	9	1	1	..	..	25	11	637	195	832
8	16	21	11	18	15	19	13	6	3	..	..	..	..	60	38	265	235	500
612	575	689	573	879	755	876	753	376	387	57	49	4	5	280	272	8,650	8,286	16,936

PREVENTABLE DISEASES.

The whole number of deaths reported within the year from all causes, exclusive of still births, is 16,582. Of this number the zymotic diseases caused 5,011 deaths. In 1882 for nine months the whole number of deaths caused from this class of diseases was 3,200; in 1883, 3,835; in 1884, 3,950; in 1885, 4,375; in 1886, 3,733; in 1887, 4,714; in 1888, 4,588; in 1889, 4,006; in 1890, 4,235; in 1891, 4,585; in 1892, 5,011.

Zymotic Diseases.

DISEASES.	1883.		1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Mortality.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Mortality.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.	Per Cent. of Deaths to Zymotic Diseases.	Per Cent. to Total Deaths.
Cholera infantum . . .	13.55	3.49	16.48	4.14	14.33	3.77	14.3	3.7	16.08	4.3	17.69	4.1	14.97	4.16	15.1	4.3	14.7	4.2	12.	3.6
Croup	5.26	1.35	4.68	1.17	6.19	1.62	5.7	1.4	3.93	1.3	4.8	1.2	4.54	1.23	4.4	1.2	4.3	1.2	5.3	1.6
Diphtheria	8.05	2.07	6.05	1.52	9.39	2.47	10.	2.7	11.13	3.05	7.67	2.	9.33	2.54	10.3	3.	14.4	4.2	16.3	4.8
Dysentery	4.14	1.06	5.62	1.41	5.46	1.43	4.2	1.1	6.04	1.01	6.86	1.25	5.04	1.37	5.3	1.5	5.3	1.5	4.2	1.2
Fever, malarial	9.54	2.36	7.49	1.88	6.76	1.78	3.	.7	2.7	.07	2.55	.68	3.24	.88	2.6	.7	3.1	.9	1.4	.4
Fever, scarlet	2.97	.76	4.5	1.13	4.45	1.17	7.2	1.1	3.7	1.03	3.53	.94	3.14	.85	2.9	.8	4.8	1.4	3.5	1.
Fever, typhoid	16.01	4.11	15.08	3.79	17.09	4.5	16.	4.1	15.06	4.17	19.13	5.1	20.16	5.49	17.5	5.	15.6	4.5	12.4	3.1
Fever, typho-malarial .	2.89	.74	3.97	1.	4.02	1.05	3.5	.7	2.84	.07	1.94	.05	1.77	.47	1.4	.4	.8	.2	1.9	.3

Above we present a statistical table showing the per cent. of mortality during the past ten years from nine of the principal zymotic diseases. The comparison is first made with the whole number of deaths from this class of diseases, and second with the total mortality from all causes.

The State and local Health Boards have worked together harmoniously for several years in their efforts to prevent all classes of diseases and improve the sanitary condition of the State.

That the united efforts of these Boards has accomplished much by an energetic enforcement of the hygienic laws of the State, rules and regulations is apparent from the fact that while the population of the State has materially increased within the past few years through the discovery of natural gas and the establishment of a great number and variety of manufacturing institutions, the total mortality from preventable diseases has remained about the same, or shows a slight decrease, when the population of the State to-day is compared with that of seven years ago. The diseases presented in the above table are all preventable.

When they make their appearance in a community their spread can be restricted, if the precaution is taken to strictly enforce all sanitary laws and regulations. As has been often said in our reports, each one of the diseases of this class has a special cause which continually reproduces itself according to its original type or pattern. This special cause is a bacillus or micro organism that determines the stages and symptoms of the sickness which its reception into the system has originated.

These germs or microbes may live for years outside the human body, to be aroused into activity when received into it.

Whether all kinds of decaying animal and vegetable matter and all characters of filth originate and develop these parasites or not, it is true that the presence of such unsanitary conditions favors their propagation and preservation. These germs gain access to the human body through the necessities of life: air, water and food.

Each disease has its own peculiar germ or seed that will produce the disease which it represents, when taken into a susceptible body.

A distinguished medical writer of this country has said that "a grain of wheat sown in suitable soil, produces wheat only."

The same law governs disease germs. They produce their own kinds of disease, and age after age manifest themselves by the same external symptoms and internal changes of the human structure.

The product developed by the growth of its germ may take on peculiarity of form, but remains typical always in respect to its essential features.

The soil in which the germ is planted may not be adapted to it; may be cold, barren, and otherwise hostile; the germ may be stunted or blighted in its course of development, but if it grows at all it will be found to present, always in some recognizable shape, its true characteristics.

The microbes or germs of zymotic diseases, which are capable of reproducing themselves, will always be found in the excretions of the body. Take, for example, typhoid fever in the stools; not only are multiplying germs found complete in their development, "but spores having a greater power of resistance to destructive agents and having the potentiality of indefinite millions of parasites."

Filth furnishes food and nourishment to those destructive agents of health and life. Filthy surroundings, and the emanations therefrom, and the inhalation of sewer gas, and all foul airs, depresses the vital powers of the human body, and renders it more susceptible to the baneful influence of the disease germ when it obtains access to it.

The number of persons infected by any one of these diseases in any community depends on the number of parasites present in the air, food and water, and the susceptibility of those who receive them.

The majority of these diseases are generally with us, and most of them are as virulent and communicable as small-pox, being attended with a greater death rate; for instance scarlatina and diphtheria (the average mortality from the latter disease is forty per cent.) which cause more deaths in one year in our State than small-pox and cholera ever did.

If either one of the latter diseases were to make its appearance in any locality of the State the surrounding inhabitants would be alarmed and hold their hands up in "holy horror," and the local board, together with the State Board of Health would immediately be appealed to, to institute vigorous measures to prevent its spread and if possible to at once stamp

it out; and still, in face of all the information that has been placed before them through the different mediums at the command of the Boards of Health, they will allow preventable diseases in their midst to pass almost unnoticed which annually cause thousands of deaths in the State. Scarlatina and diphtheria are of far more importance to the active, energetic, conscientious sanitarian than either small-pox or cholera; the tenacious character of their contagion is well known.

Houses have been carefully cleaned and supposed to be thoroughly disinfected to which families have returned to lose their last child.

Scarlatina is so mild sometimes that it is not known that a child has had it until it sicken with its sequel (acute albuminuria) or has communicated it in a more virulent form to others. This is also true to some extent of diphtheria.

The mild cases of these diseases have frequently been the means of communicating them in a virulent form through our public schools.

Whenever any of the communicable diseases make their appearance in a community the greatest of care should be exercised by the people to prevent their continuance and spread. If a child that is attending school complains of any of the symptoms of any sickness of a preventable character that is prevailing in the neighborhood, it should be taken out of school and kept at home; isolated until the disease has had sufficient time in which to develop.

It is always advisable in such cases to call a reputable practicing physician to determine what is the matter with the indisposed child.

If this course were always pursued the health and lives of many children would be spared.

There are many preventable, communicable, contagious and infectious diseases (such as measles and whooping cough) that the people, as a rule, through ignorance or otherwise, do not endeavor to keep their children from taking, that yearly destroy more lives in our State (if not directly, indirectly, by their sequels) than small-pox ever will.

What are the best means to be employed in restricting the spread of communicable diseases of various characters, and what are the best methods to be employed in securing the co-operation of the public in general in the work required to be performed in their restriction?

The establishing of isolation hospitals with some competent person in charge, such as they have in New York City and Boston, has been suggested for the reception and treatment of those sick with contagious and infectious diseases as a more economical and effective method for cities of 5,000 inhabitants than treating its patients at home. (See Transactions of National Conference State Boards of Health, published in this report.)

We feel that at the present time the consideration of the erection of such institutions in this State is entirely out of the question, and, therefore, we will not discuss their importance.

The most important thing to do when a person is taken sick with a communicable disease is, without delay, to place him in charge of a nurse and completely separate him from the well, and allow no one to visit him during his sickness except the persons nursing him and the physician. In other words, complete isolation should be enforced. The room should be comfortably heated and properly ventilated, from which curtains, carpets and all unnecessary furniture has been removed.

All excretions from the body of the sick person should be thoroughly disinfected; also the clothing and everything else connected with the sick room, before it is removed. Every person who has been exposed to the disease should be prohibited from visiting their neighbors and friends, and mingling with the general public until the period of incubation has passed.

After the recovery or death of the patient the sick room and everything connected with it, together with the entire premises, should be thoroughly disinfected, and to thoroughly disinfect means to kill all disease germs that may be lurking about.

Can this be done? Some say it can not, while others say it can be. Whether the destruction of all disease germs can be accomplished or not, cleaning and disinfection of the house should be practiced in as thorough a manner as possible under the supervision of a competent person.

In order to accomplish these things the co-operation of the medical profession must be secured, and this can best be done in the way suggested by one of our leading sanitarians, "by educating the people who employ and pay physicians, so that the people will prefer the physician who acts for the prevention

of disease rather than one who does not so act." Public sentiment will then make co-operation easy. It is asking too much of the medical profession to ask physicians to go far in advance of public sentiment in efforts for preventing the spread of communicable diseases.

Self-preservation is as much a "first law of nature" to the medical profession as to other classes of human beings.

It is fair to assume that, in the future as in the past, physicians will continue to lead in philanthropic work, especially in this branch of sanitary reform, but I consider it the duty of practical sanitarians (certainly the duty of all of us who are connected with State Boards of Health) to see to it, that, so far as possible, public sentiment be constantly advanced so as to keep pace with the rapid progress in the medical profession.

If we expect physicians to co-operate with us in efforts to prevent the spread of consumption or any one of the diseases mentioned, we must ourselves lead off and allow them to co-operate, and not expect them to do all of the work.

The same gentleman says: "One of the best methods of securing the co-operation of the general public is the popular sanitary convention. Here scientific nomenclature is cast aside and the truths of science are clothed with the language of the people. Here statistics become charged with the enthusiasm of the speaker, the inattentive become attentive, and the blind begin to see."

While this Board has always been in favor of holding sanitary conventions in different parts of the State for the purpose of educating the people in all matters relating to hygiene, it has not been able to do so because it has not had the financial means at its command to defray the expense of such educational gatherings and make them successful.

For years the Board has employed another method which is believed to be effective in compelling the attention and co-operation of the people, and that is the distribution of circulars giving full instructions how to restrict and prevent communicable diseases in localities where our citizens are threatened with sickness and death from any of the diseases enumerated.

It is found that the people will read such literature when their own homes are threatened with disease, whereas, if it was to come to them at any other time it would be more than possible that it would reach the waste basket unread.

Throughout the State both town, city and county health officers have pronounced them a great success in restricting and preventing disease.

But the educational effect of the distribution of these pamphlets in their manner, their effect in forming public sentiment favorable to the restriction and prevention of disease is of even greater prospective importance than is the immediate result.

In order that local health officers might thoroughly understand the rules of this Board relating to the protection of the public health, on October 6, 1891, issued the following, which is self-explanatory.

STATE BOARD OF HEALTH OFFICE,
INDIANAPOLIS, October 6, 1891. }

To Town, City and County Health Officers:

In view of the fact that scarlatina and diphtheria are prevailing to such a degree of severity in some localities of the State, that it has been found necessary to close the public and private schools, the State Board of Health feels that it is its duty to call the attention of health officers to the rules, regulations and laws, pertaining to the public health, and insist upon their enforcement.

It is in times of danger from contagious and infectious diseases that the people look to boards of health for protection and relief. You are especially referred to the following rules (passed and promulgated by this board) 2, 4, 5, 6, 7, 8, 9, 11 and 12 relating to the reporting, control and management of such diseases. By reading these rules you will see that a health officer's duty does not cease with the placing of a flag or card on a house announcing the fact that a certain contagious disease is prevailing within, but that it is the first step in his line of duty, toward establishing and maintaining a quarantine. The rules which we refer you to (a copy of which we sent you some time ago) and which we ask you to study carefully, are simply to the point and very plainly instruct you what to do in all cases of epidemic diseases occurring within your jurisdiction.

This Board looks upon an outbreak of a contagious and infectious disease extending beyond its first victims unchecked as an evidence of neglect or ignorance of duty of local Boards,

"inexcusable because a knowledge of methods of prevention or control, and the legal power to enforce regulations to those ends have been abundantly provided."

We regret that we are compelled to say that it has come to our knowledge that funerals of persons dead with scarlet fever and diphtheria have been publicly held in the State within the past few months. A health officer who allows within his jurisdiction a public funeral of a person dead from one of these diseases is most certainly neglectful of his duties. Because a funeral is held at the residence of the deceased and not in a church, it does not necessarily follow that it is private, as the rule requires that it should be in all cases of death from one of the diseases named. Health officers should guard the funeral of persons dead from these diseases with the greatest care, and see to it that rule 13 in every particular is strictly enforced.

The State Board of Health is anxious that the vital statistics of the State be brought as near a state of perfection as possible within the coming year, and therefore ask that you cause the strict enforcement of rules 15, 16, 17, 18, 19, 20 and 21.

Section 9 of the act establishing a State Board of Health passed February 19, 1891, provides that "it shall be the duty of County Boards of Health to promulgate and enforce all rules and regulations of the State Board of Health in their respective counties, which may be issued from time to time for the prevention of epidemic and contagious diseases.

And the Secretary of any Board of Health who shall fail to or refuse to promulgate and enforce such rules and regulations shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not exceeding one hundred dollars, and upon a second conviction the court or jury trying the cause may add imprisonment in the county jail for any period not exceeding ninety days.

By order of the Board.

C. N. METCALF, M. D.,
Secretary.

JOHN N. TAYLOR, M. D.,
President.

DIARRHŒAL DISEASES.

In this class we have placed cholera infantum, cholera morbus, diarrhœa, dysentery and entero-colitis.

The whole number of deaths from this class of intestinal diseases within the year was 1,007. The greatest number of deaths occurring in the months of July, August and September, which the mortuary tables published in another part of this report show.

Of this class cholera infantum caused over 59 per cent. of the deaths, which were children, under one year of age. We feel that under our present system of collecting vital statistics we do not get one half of the deaths from any one disease. When we recognize the fact that this is one of the diseases easily prevented by the observance of a few hygiene laws, we can not but feel that the ignorance and negligence of parents in caring for their children is responsible for so many being carried to an early grave. Mothers too frequently neglect or refuse to look after the comfort and health of their children, because it takes too much of their time from the pleasures and gayeties of life. The poor little creature entering upon the threshold of life is placed in charge of a nurse who usually is entirely ignorant of the duties of her position—knowing nothing about the proper feeding, cleansing and clothing of a child, and having only a mercenary interest in its welfare.

If it happens to be a wet nurse it is more than probable that at the time of her engagement no investigation whatever was made to determine that she was free from disease, or whether the germs of consumption, scrofula, syphilis and kindred diseases were present in her system. When a wet nurse is not employed the child is nourished on cow's milk, and no investigation has been made to find out whether the cow, the source from which the milk and nourishment of the infant is derived, is affected with cancer, tubercle, or any other disease that might be communicated to a human being. If the child is not fed on cow's milk, it is given one of the numerous already prepared "infant foods" sold by all druggists, or given food only fit for the stomach of a grown person.

There is no food so good and healthy for an infant as its mother's milk. All others when compared with it are frauds.

Clothing and cleanliness, pure fresh air and sunlight to develop its health and growth are seldom considered by those above all others who should look after the prosperity, in all directions, of their offspring.

We feel that we are doing our duty to mankind when we insist that mothers should always nurse their children at the breast unless they are physically incapacitated.

A very few of the most prominent causes that play an effective part in the development of the most important and fatal disease affecting children have been mentioned, and we hope that those who have read what we have said will heed our suggestions. The following are some of the causes which tend to produce the class of intestinal disturbances enumerated in all stages of life:

Filthy and insanitary surroundings of homes, such as defective plumbing and house drainage, soil moisture, decaying animal and vegetable matter, depressing influences of warm weather, improper clothing, want of cleanliness, crowd poison, drinking polluted water, and eating tainted and unwholesome food, and the every day violation of well known and established health regulations. There can be no possible doubt but that the prevalence and mortality of this class of diseases can be materially lessened by strict observance of sanitary and hygienic rules and laws.

ACUTE LUNG DISEASES.

The total number of deaths reported within the year from this class of diseases is as follows:

Bronchitis.....	272
Congestion of the lungs.....	87
Influenza.....	
Pleurisy.....	21
Pneumonitis.....	1,374
Pneumonitis, broncho.....	17
Pneumonitis, catarrhal.....	29
Pneumonitis, pleuro.....	14
Pneumonitis, typho.....	18
Total.....	1,832

A very large per cent. of deaths from this class of diseases occurred in the months of February, March and April.

The conclusions reached from a study of the mortuary tables and the figures presented teach us that the people, with the coming of mild weather become careless, and unnecessarily expose themselves.

In this climate, during the months attended with the greatest fatality, the weather is very changeable.

When a mild day presents itself many people will lay off their overcoats, mufflers and overshoes, which they have been accustomed to wear during the severe cold weather, and a large number pay the penalty in sickness and death from these diseases, as a result of their imprudence.

If the people could be taught to take the proper care of themselves during the season of the year, the sickness and mortality from this class of diseases would be greatly lessened.

LETTERS FROM COUNTY HEALTH OFFICERS.

ADAMS COUNTY.

The sanitary condition of this county during the past year has been very good. We have had no epidemics, with the exception of la grippe. We have had a few cases of typhoid fever, also scarlet fever.

Our county asylum for the poor has been kept clean and as well ventilated as it possibly can be with the kind of a building we have at present. Our county jail is well heated and ventilated, although there is a slight defect in the sewerage caused, we think, by some of the branches from the main sewer being laid in a certain per cent. of quick-sand, causing the tiling to fill up at different places.

The school houses have been kept in a good sanitary condition, clean and well ventilated. The city prison is still with us, and, although not quite as bad as we reported last year, it still merits nothing but our strongest condemnation.

Our physicians, as a rule, report births fairly good, but we can not say as much in regard to death reports.

Respectfully yours,
H. F. COSTELLO,
Secretary Adams County Board of Health.

BARTHOLOMEW COUNTY.

I believe the sanitary condition of this county has been better during the past year ending September 30, 1892, than ever before, there being only two hundred deaths reported from all causes during the year, three of which were not returned in time to be placed upon the last quarterly report.

This speaks well for the sanitary condition of a county with over twenty-three thousand inhabitants, especially when three epidemics of contagious and infectious diseases spread over it during the year.

In December, January and February epidemic influenza (la grippe) spread over the county, and many of the citizens were prostrated by it, but the mortality was light; only ten deaths were reported from it.

Scarlet fever in epidemic form commenced in October, 1891, and continued through the winter and spring in a mild form. It visited almost every neighborhood in the county, but there were only three deaths caused by it.

Diphtheria made its appearance in October, 1891, in what appeared to be a sporadic form, as there were only three cases in as many localities, with no spread, then in February one, and in March one, April one, June one, July two, August three, and about the first of September it assumed the proportions of an epidemic in Columbus and vicinity, and during the month there were reported forty-nine cases. And from this disease reports show ten deaths during the year, which I think a light mortality for diphtheria. How to account for the outbreak I do not know, unless it be from the use of polluted water, which idea, if I remember correctly, authorities on the subject do not sustain.

Yours respectfully,
J. S. ARWINE, M. D.,
Secretary Bartholomew County Board of Health.

BOONE COUNTY.

In reporting the sanitary condition of Boone County during the year 1892, now near closing, can say that the health of the county, generally, has been good, hardly the usual amount of sickness for this county, all of which I attribute to the thorough ditching and tiling that has been rapidly going on throughout the county for the last few years. We used to have a "*frog pond*" at every turn of a road, now there is not a *pond* in the county. We have in a great measure destroyed all sources from which "*malaria*" generated, and an old-fashioned chill is not seen here at present. We have had a few cases of typhoid fever, diphtheria and scarlatina, but not of an epidemic character. The diphtheria was propagated by a corpse brought here from Indianapolis, as reported dying of membranous croup. The coffin was opened and several children present took diphtheria, of which one died. I would admonish all physicians to be careful in diagnosis and if they have the slightest suspicion of the disease's contagious character, they should council caution and treat the final disposition of the corpse as contagious.

We are trying to get our city in a cleanly shape so we can meet successfully the much dreaded epidemic, cholera, that is making such strenuous efforts to get a hold upon our *shores*. We have several deeply driven wells in our city, and I council all wells that are put down in the future to be driven to the depth of several hundred *feet*. Our county, topographically, is a high *basin*, and our city in the center; so we drink surface water most of the time. We find splendid water at the depth of several hundred feet which is usually impregnated with *minerals* of the most healthful character. The physicians are not as punctual as they might be in making returns, but do as well, I have no doubt, as any in the State. It would be much better if there was some inducement offered them to be more punctual. I hope there will be some legislation in that respect this winter.

Respectfully submitted,

A. P. FITCH,
Secretary Boone County Board of Health.

BROWN COUNTY.

In answer to your letter concerning the public health will say that the sanitary condition is good. Have had a few cases of diphtheria and typhoid fever, but no epidemic. In every case the sanitary measures recommended by the State Board of Health have been rigidly followed, consequently there has been no spread of the disease. The public buildings are in good sanitary condition. There is some difficulty in getting reports from physicians, especially in regard to deaths.

Yours respectfully,

JOHN C. ROSS, M. D.,
Secretary County Board of Health.

CLAY COUNTY.

The sanitary condition of Clay County has been good for the year ending September 30, 1892. The school-houses are generally good structures, but in some buildings the means of ventilation are deficient. The county asylum is in fine condition—ventilation good, the apartments clean, bedding sufficient, and the inmates well cared for in every way. The county jail is only in fair condition. Some improvements, I think, ought to be made.

Very truly, etc.,

A. H. NALL,

Secretary Clay County Board of Health.

DEARBORN COUNTY.

I have the honor of presenting my yearly report as Secretary of the County Board of Health of Dearborn County. I take pleasure in stating that the sanitary condition of this county is very much improving, especially the last year. The city of Lawrenceburgh has had an entire cleansing. Every house and its premises have been examined and brought up to the requirements of the rules of the Board as far as possible, and every town in the county has been looked after and has been very prompt in carrying out sanitary rules as made known to them. The school-houses are in fair condition for ventilation and water-closets, also a good supply of pure water. The township officers have been unanimous in giving their official help in carrying out the rules of the Board as far as they could. The public buildings have been provided with sewerage and have undergone a great renovation, all except the jail and that is so dilapidated and so near nothing that we can not say anything in its favor only the Board of Commissioners are busily at work to remove the nuisance by remodeling and fixing the old jail or by the construction of a new one, which will, I think, be done in a short time. The people are beginning to see the utility of sanitary measures. The past year has been one of unusual good health. No epidemic of any kind has made its appearance in the county and we are hoping by constant industry and close observance of the rules and regulations of our noble State Board that the improvement will be more fully developed during the coming year than ever before. There are some improvements I think that should be attended to the present winter, I mean legislative improvements, but perhaps it may not be thought wise. I think the appropriation for the State Board should at least be doubled and it would not be means unwisely appropriated, if it were quadrupled I think it would be wisely used. Health is wealth, and prevention of disease is better than cure.

Respectfully,

S. B. CHAMBERLAIN,

Secretary County Board of Health.

DECATUR COUNTY.

The sanitary condition of Decatur County for the last year has been fully up to the average. No epidemics except la grippe having occurred and the mortality from it has not been great. The surface of Decatur County being undulating, drainage is good, most of the county is well under-drained. The county is made up largely of rich agriculture farms and well-to-do farmers who are well educated, intelligent, and good sanitarians.

Scarlet fever and diphtheria have been present in one or two localities, but only a few cases having died. The county asylum is kept clean and in good sanitary condition, but few deaths having occurred in three years. The drainage of our jail could be improved; but the prison is kept as clean as could be expected. A sanitary inspection was made this year of Greensburg and vicinity, during the prevalence of cholera in New York, which resulted in placing the city in a first-class sanitary condition. The court house, city and county school buildings, are well lighted, ventilated, and kept in good sanitary condition. Decatur County, one of the banner counties of Indiana, is wide-awake and shows up with any county in the State.

Respectfully submitted,

T. B. GULIAFER,
Secretary County Board of Health.

DEKALB COUNTY.

In regard to the sanitary condition of Dekalb County, would say that it is in the best of condition. We have had no epidemics that amounted to anything. A few cases of measles at Auburn and also a few cases of scarlet fever in Waterloo in a mild form. The sanitary condition of the asylum and jail is also good. In getting the physicians to report cases there is no little difficulty, although I have visited most of them and furnished them not only with the proper blanks, but also with postage. In the next year I am in hopes they can be induced to attend to it better than heretofore.

Very respectfully,

FRANK BROUGHTON,
Secretary Board of Health Dekalb County.

DELAWARE COUNTY.

The past year has not witnessed any epidemic in our county. The exanthemata have been less prevalent than for several years previous. Typhoid fever accompanied the drought of September and October, but the disease did not gain a formidable foothold in any locality.

This fall an organization of the county was effected and under the supervision of the State Board of Health the following local health officers have been appointed in the various townships :

Dr. J. N. Bell, New Burlington ; Elijah Early, Granville ; Dr. J. V. Baird, Albany ; Dr. W. R. Rogers, Shideler ; Dr. R. Marshal, Cowan and Oakville ; Dr. D. N. Shively, Yorktown, Cammack and Reed ; Dr. D. L. Trowbridge, Stout ; Dr. A. H. Good, Selma and Smithfield ; Dr. N. C. Dill, DeSoto ; Dr. Geo. F. Ames, Eaton ; Dr. T. J. Mansfield, Royerton ; Dr. W. S. Brandon, Daleville and Cross Roads ; Dr. D. O. Munsey, New Corner ; Dr. J. R. Tuttle, Wheeling ; Dr. Frank G. Jackson, Muncie.

All sanitary matters in the respective localities are under control of the local health officer, who will co-operate with the County Board.

The public buildings of our county are in good sanitary condition.

HUGH A. COWING, M. D.,
Secretary.

DUBOIS COUNTY.

In reply to your inquiry will say that the general health of Dubois County for the year ending September 30, 1892, was good.

During the year there were reported seven deaths from typhoid fever, one from diphtheria, but there has been nothing like an epidemic of any infectious or contagious disease, unless I except la grippe, which was very prevalent last winter, mostly during January. There were twelve deaths from la grippe, and no doubt it hastened death in other cases where it was a complication, especially in cases of consumption, of which disease there were twenty deaths, and pneumonia, of which there were thirty-four deaths.

The sanitary condition of the school-houses is perhaps as good as in other counties. Our School Superintendent is alive to his duties and looks after the welfare of the pupils.

The County Poor Asylum has been free from contagious or infectious diseases. The care of the inmates is ordinary, ventilation bad, drainage fair.

The present county jail is a disgrace to the county. It is poorly ventilated, dark, dirty and unwholesome, but perhaps as well kept as the nature of the building will permit. A new structure is now being erected, which no doubt will fill all the requirements of good sanitation.

Our physicians as a rule are wide-awake, progressive men, and generally send in their reports promptly and without complaint. Some few of them are still a little negligent, and not in sympathy with the Board of Health as much as they should be. The greatest trouble is with the *laity* ; they are too loath to obey the requirements of the Health Board. They need more education on good and perfect living, and a few doses of the *law* occasionally would be good medicine for a few of them.

In conclusion will say Dubois County's death rate is very low, her birth rate very high.

Respectfully,

B. B. BRANNOCK,
Secretary Dubois County Board of Health.

FAYETTE COUNTY.

The health of the inhabitants of the city of Connersville and Fayette County for the year ending November 1, 1892, has been better than any year since I have been a practicing physician in the county, which dates from 1874.

There has been no epidemic of any diseases in the last year and very few sporadic cases of preventable diseases. Our public building, poor asylum and school houses are in excellent sanitary condition. One cause of the better and improved health of our citizens is a better understanding of sanitary laws, and a desire and readiness to assist the health officers in the discharge of their duties. Every order issued by the health officers has been cheerfully and punctually complied with and obeyed and all have lent a helping hand to not only see that their own premises are kept in a sanitary condition, but that all vacant lots, roadways, ponds and all pools are cleaned, drained and disinfected.

Yours respectfully,

JOHN E. CHITWOOD, M. D.,

Secretary Fayette County Board of Health.

FOUNTAIN COUNTY.

The sanitary condition of Fountain County for the year ending September 30, 1892, has been exceedingly good. With the exception of la grippe last winter, there have been no violent epidemic diseases throughout the county.

There has been less sickness in Fountain County, attributable to preventable causes, than in former years.

The exceedingly long drouth of September and October of 1892 caused great scarcity of water to many of the citizens, but the recent rains brought much relief.

The city of Attica, with a population of 2,500, has an excellent system of water works, with an abundant supply of good, pure water.

Covington, with a population of over 2,000, is now erecting new water works, which will be completed by the spring of 1893. The supply of water will be brought from immense wells at west side of the city and pumped into a reservoir 110 feet high, which will force water into every part of the city. Covington has long suffered from the scarcity of wholesome water. The same power that supplies the city with water will generate electricity to illuminate our streets and dwellings.

Our County House, for the care of the poor, is in good, healthy condition. The inmates are all cleanly, well nourished, happy and contented. Mr. and Mrs. Nelson Nebeker have charge of these unfortunates, and are a good father and mother to them.

Very truly yours,

GEORGE ROWLAND.

FRANKLIN COUNTY.

The general health of Franklin County for the year ending September 30, 1892, was good. There was no epidemic of contagious diseases, a few cases of diphtheria and typhoid fever were reported; they were confined to certain localities. In the asylum for the poor and orphans' home the health has been good, the inmates are well taken care of and the sanitary condition good.

Yours respectfully,

J. H. QUICK,
Secretary County Board of Health.

FULTON COUNTY.

The health of Fulton County has been good for the year ending September 30, 1892. There has been no case of small-pox nor cerebro-spinal fever during the year, and while there have been reported a few cases of diphtheria and scarlatina, neither of them could be called other than sporadic in character. Typhoid fever has also been only sporadic as the cases reported have been scattered over the county. It is not at all likely that the entire number of either typhoid fever, diphtheria or scarlatina cases have been reported; but full reports would probably not show any locality having many cases.

Yours respectfully,

C. F. HARTER, M. D.,
Secretary County Board of Health.

GRANT COUNTY.

Replying to your card of the late instant, inquiring after the sanitary condition of this, Grant County, would say:

It is in a very good condition at this time, though we have had quite an epidemic of la grippe, last December and January, extending until the latter part of April, complicated with other trouble before death.

After the scourge of la grippe we had quite a serious time with diphtheria and scarlet fever, which gave us considerable trouble.

We had to educate our people to the importance of quarantine and to disinfect their houses, but after some trouble and persuasion we succeeded in stamping it out, but this fall it returned with more vigor than ever, and there has been several deaths from it, and, though we now know we can now counteract it, if we can educate the people to understand what we mean by quarantine and disinfectants.

It seems they are very anxious to obey the instructions of the local health officer.

The diphtheria was mostly confined to the city of Marion and town of Fairmount.

You will not wonder that the city of Marion had the scourge it did when I tell you that this city has grown from a town of 4,000 five years since, to a blushing, blooming city of 13,000.

The new streets, and the imperfect drainage that would necessarily occur from making cornfields into resident property, all in so short a time, with no system of sewerage to assist in carrying off the slops of the streets and alleys, show that a great amount of work would be necessary to keep our city in good sanitary condition.

It required all the time of the health officer to keep it in passable condition.

The doctors report fairly well by urging them up at the end of each month by postal cards.

Some of our "learned doctors" will not report their deaths or births at all; others report as it suits them; but perhaps we can convince the knowing ones that it is a great deal easier to report than to pay for it.

THE ORPHANS' HOME.

The Orphans' Home is in a very fair condition, sanitarily.

They have about forty-five children in charge. It is a brick and wood building, situated on an elevated 10-acre tract of land, overlooking the city of Marion, about a mile from the court house, and connected with the city by telephone.

The managers of the Home are of the best ladies of our city, are good, Christian, God fearing women. The officers consist of Mrs. Dr. Wall, Pres.; Mrs. J. B. Lytle, Sec.; Mrs. G. W. Sweetser, Treas.; Mrs. J. V. Sweetser, Vice-Pres.; Mrs. Geo. Gunder, Mrs. S. Squires, Mrs. S. Hockett, Mrs. Dr. Henley, Mrs. Dr. E. P. Jones, Mrs. Jos. Small, Mrs. Alice Wood, Mrs. Ol Goldthwait and Mrs. Sweet.

The only thing the architect failed in the specifying was fire escapes, which are needed very much, and some day we may have cause to regret the non-observance of this important feature.

THE COUNTY INFIRMARY.

The County Infirmary is in good sanitary condition, the house being new, and having all the modern improvements and conveniences for a county house, and is kept by competent persons.

The county jail is in a fair condition. The court house is in good condition generally, and under the present janitorship, will remain good and healthy.

The school houses in the rural districts are about one-half of them unfit for school, although we have built several new school houses of late, and it is very hard to get some people to understand that school children should have any conveniences, but we hope to have the houses in good condition, with plenty of water on the grounds.

The city schools are in good condition, sanitarily, and we are building a mammoth structure on the site of an old dilapidated building that has been an eyesore to the community for years, at a cost of \$25,000.

Jonesboro will build a new school house in the near future, the cost of which will be about \$10,000. It will accommodate all the school children of the town.

Fairmount's school houses are in good sanitary condition. They completed a large school house there last spring. Upland will build a good house soon.

Hoping that the improvement in school buildings will still continue, I remain,

Yours respectfully,

J. B. LYTLE,

Secretary Board of Health of Grant County.

GREENE COUNTY.

The sanitary condition of Greene County is very good this year. We have had a few cases of diphtheria, also a few cases of scarlatina. The county is in as good condition as could be expected at present.

Very truly yours,

B. M. SHERWOOD, M. D.

Secretary.

GIBSON COUNTY.

Since reporting the sanitary condition of Gibson County one year ago there has been no change of any consequence. The public buildings, with the exception of a few country school houses, are in good condition. An effort has been made to have local boards of health established in all the incorporated towns of the county, but has only been successful in Oakland City. The health officer there is giving the County Secretary efficient aid in the matter of collecting reports.

Very truly yours,

G. L. DORSEY,

Secretary County Board of Health.

HAMILTON COUNTY.

The sanitary condition of the jail, county poor asylum and orphans' home are all in excellent condition. The general sanitary condition of the county is good. There were no epidemics of any kind in the county within the past year. A few cases of diphtheria, scarlet fever and typhoid fever were reported, but prompt measures were resorted to to suppress them and prevent their spread. The physicians are generally not prompt in making reports of diseases as required by law.

E. C. LOEHR,

Secretary Hamilton County Board of Health.

HARRISON COUNTY.

In compliance with your request concerning the sanitary condition of our county I will say the general condition is good, as is evidenced by the small number of deaths reported from zymotic diseases. We have had very little trouble from typhoid or other contagious diseases, except pertussis (whooping-cough) and diphtheria, the latter of which is now prevailing in the southern part of the county, but I think all the physicians are using their best endeavors to quarantine the disease. Have had several cases of scarlet fever originating sporadically here and there over the county. Most cases of mild form. Here I may say that many doctors throw people off their guard by calling it scarlet rash instead of scarlet

fever. When the parents hear the doctor in his wisdom say it's only scarlet rash their fears all subside and they take no care of the patient and less care to keep others from coming in contact with the one afflicted. Our County Commissioners became interested in the sanitary condition of the corporations of the county and had me to make a tour of inspection by visiting each corporate town in the county and urge the Board of Health of each town to enforce the rules and regulations laid down for the benefit of the public. I found some of the towns in excellent sanitary condition and others were put to work cleaning up. Here I will remark that I found some of the Boards unorganized because of the complications of the law regulating the election of Town Trustees, none having been elected at last regular election in the spring. Hence, I think the Legislature might assist in this matter by making the election of Town Boards of small towns more simple and less expensive. I believe all physicians are complying with the laws, unless it be a little tardiness in making reports.

Hoping this may be sufficient from our county, I beg to subscribe myself most respectfully,

Z. T. FUNK,
Secretary Board of Health of Harrison County.

HENDRICKS COUNTY.

The sanitary condition of Hendricks County is reasonably good at present. During the year which ended September 30, 1892, contagious diseases have been endemic at different times, and at different places in the county.

There have been reported, of typhoid fever, twenty-two cases with four deaths; scarlet fever, fifty-one cases with four deaths; diphtheria, fifty-six cases with eight deaths; la grippe, which was epidemic, about 2,800 cases with twenty-seven deaths. Scarlet fever has prevailed to a greater extent than it otherwise would have done by being in so mild a form as not to be recognized by the families, and allowed to be communicated to others before physicians were called, but physicians have been prompt to act when brought in contact with contagious diseases.

C. E. FARABEE, M. D.,
Secretary Hendricks County Board of Health.

HENRY COUNTY.

Henry County is in a good sanitary condition, also, the school houses, jail and county infirmary, and all the premises thereto. No epidemic of any character has prevailed within its borders during the year; nor any contagious or infectious disease to any extent.

During the past winter and spring some cases of la grippe appeared in various parts of the county which proved fatal among the aged, and especially those who were exposed to the changeable weather, developing pulmonary troubles.

The mortality in the county was greatest among those whose ages ranged from 65 to 90 years.

Very respectfully,
G. W. BURKE, M. D.,
Secretary County Board of Health.

JAY COUNTY.

In complying with your request for information regarding the general health and sanitary condition of Jay County, I make the following report:

The general health of the county has been good during the past year. We have had a few cases of scarlet fever, whooping cough, measles and typhoid fever, but there has been no epidemic. Our school buildings are in fair condition and the health of the pupils has been good. Our schools are well managed and are all doing good work. The jail and infirmary are poor buildings, but they have been well cared for, and the inmates are in good health. Our county is well cared for by the County Commissioners and boards of health, and all will be done for the general health that can be done.

Respectfully submitted,

JNO. W. HALL,
Secretary.

KOSCIUSKO COUNTY.

In response to your favor concerning the sanitary condition of Kosciusko County, have the pleasure of reporting a very healthful year.

This county contains twenty-six lakes of considerable size, which at one time were surrounded by thousands of acres of swamp marsh land, productive of many cases of malaria and diseases with malarial complication. A greater portion of this waste, disease-breeding land has been thoroughly drained and ditched and turned into pleasant, productive farms.

The drainage of Kosciusko County is thorough and being pushed with energy, making it one of the most healthful counties in the State. Swamps are rapidly becoming things of the past.

Much of the improved health is due to the system of drainage.

This county is thickly populated and dotted here and there by thrifty railway towns, surrounded by rich farming communities, and gives support to a large corps of well educated physicians, who practice "it is better to prevent than to cure disease," and who are vigilant in hunting down every avenue of contagion or infection, and ready to suppress every agent which may mitigate against public health.

During the year 1892 there has not been a case of small-pox in the county.

There have been several mild cases of diphtheria and scarlet fever, but by prompt quarantine and assistance of the attending physician the diseases gained no foothold.

For a number of years past the southeastern part of the county has been scourged by numerous cases of typhoid fever, and the villages of Sidney and Packerton were especially visited by this unwelcome guest.

During the year 1892 there have been but a few cases in this locality.

Dr. Dorsey, of Sidney, and Dr. Howat, of Packerton, have rendered valuable assistance in improving the sanitary condition of their towns, and acted in the capacity of health officers for their respective localities.

Had it not been for a free distribution of la grippe during the early months of the year the esculapian (?) purse would not have been so well filled.

The deaths were among the aged and feeble.

The Court House, one of the best structures stone, iron and wood could make, lacked proper water supply and ventilation. The offices were frequently permeated by the gases from the closets. This defect has been greatly improved by enlarging the water supply and ventilation.

The County Jail is a model of security and in first-class sanitary condition. The floors are cement or iron. Well flushed closets are in every ward. Under the skillful care of Sheriff Ripple this is a pleasant abode for our light fingered brothers and other convicts.

The County Asylum is in good sanitary condition, and well kept by the Superintendent and his wife, who seem interested in the welfare and comfort of those reposed under their care. The building is ancient and lacking the modern comforts and facilities so necessary in asylums. The building is very poorly heated by wood stoves, which add to the dangers of such a house. The Commissioners have been urged to put in steam or hot water and do away with the danger of small wood stoves. The custom of promiscuous intermingling of inmates I severely criticize, as too great familiarity breeds contempt, and in this are "bad brats." Who knows? But the way the building and wards are arranged it is difficult to keep complete separation.

The school houses of Kosciusko County are models of comfort and convenience—good water supply, well ventilated and roomy, with the exception of the school buildings in Warsaw, which are overcrowded. A portion of the younger pupils occupy basement rooms which are three or four feet below the surface of the earth. These rooms are crowded by small children who inhale the surface atmosphere with no benefit. The central building is poorly ventilated. Warsaw, to do justice to her children, must make more ample arrangements for their educational comforts.

Much credit is due the County Commissioners for the very able and ever ready assistance rendered me during the past year; also to the profession and local Boards of Health for the prompt and kind aid given as guardians of the public health.

Very respectfully yours,

R. PARKS WHITE,

Secretary Kosciusko County Board of Health.

LAKE COUNTY.

The following is a report of sanitary survey of Lake County for the year 1892:

The Lake County poor house is located on a farm three miles east of Crown Point, the county seat of Lake County; there are 160 acres of farm land and 150 acres of pasture and timber land in the farm. The poor house has two large wards, one for men and one for women, each 50x50 feet, and eight private rooms 10x16 feet; also, two wash-rooms 8x16 feet; above are three rooms 15x15 feet and two rooms 12x16 feet. On the main floor is a kitchen 16x16 feet; a dining-room 16x24 feet. In the basement, wash-room 16x16 feet; store-room 10x12 feet; furnace-room 16x21 feet; store-room 16x21 feet; besides several smaller rooms used as pantry, store-rooms, etc.

The building is heated by steam, the heater having been put in last summer. There are fourteen inmates at present, five women and nine men. One woman is foolish, one helpless from rheumatism and three superannuated. Two of the men are cripples, having lost a leg, two are crazy and one is foolish; the rest are superannuated. During the year, three men and one woman have died. The house is well ventilated and the surroundings are good. The food supplied the inmates is of good quality and well prepared. The inmates are comfortably clothed.

The insane department contains six cells and hall, heated by a wood stove and ventilated and lighted by windows. The water is obtained from one well and three cisterns.

The County Jail, located in Crown Point, is built of brick; the residence part, two stories, contains four rooms below and four above, each about 14x14 feet. There are six cells in a steel room, each 6x12 feet, beside four cells of the same size for women or insane. The entire building is heated by steam and well ventilated. The bath-room and water-closets are connected with a well dug to the sand twenty-five or thirty feet deep. This will probably be changed and some better disposition made of the sewage in the near future.

Of the school houses in Lake County, there are in the townships of Center, two brick and eleven frame; Cedar Creek, nine frame; Calumet, nine frame; Eagle Creek, one brick and eight frame; Hobart, six brick and eight frame; Hanover, eight frame; North, four brick and eight frame; Ross, one brick and fourteen frame; St. Johns, ten frame; West Creek, twelve frame; Winfield, two brick and five frame. The high school building in Crown Point contains eight rooms, besides the superintendent's office and basement. Heated by hot air furnaces, ventilated by ventilating shaft and windows. Nearly all of the rural school houses have but one room and are heated by stoves in which wood or coal is burned. Water is supplied in most cases from adjoining farms. In a few of the school yards there is a well for the use of the school, all are supplied with out door water-closets. Number of school houses, 108.

Respectfully,

G. D. BRANNON, M. D.,
Secretary Lake County Board of Health.

LAPORTE COUNTY.

Since the people have learned by practical experience that the existence of a public or private nuisance, which is amenable to the law, need not be tolerated, but can be speedily abolished by enforcing the law touching the case, they (the people) do not long hesitate in applying the remedy. Hence from remote or other localities of the county the health officer is frequently called upon to compel the abatement of nuisances.

The prompt and successful abatement of a nuisance is appreciated by those most interested and like the fame of a good deed or a heroic act is disseminated throughout the neighboring townships, and if other similar or unlike noxious conditions exist there the same treatment is demanded for them. Thus in a notable degree purifying the air removing a great annoyance and discomfort and probably also a dangerous source of infectious disease, at the same time vastly improving the external features of mother earth and marking one more step in an advancing civilization.

Another step in the same direction recently taken made an impression upon the writer, probably on account of its practical relation to himself. The Commissioner of Immigration of New York City notified the State Board of Health of the arrival from Europe and his departure for Laporte of an immigrant who came over on a steamer upon which small-pox existed, with dates of arrival and departure. The State Board forthwith ordered the Health Officer of Laporte County to locate the small-pox suspect and keep him under supervision until the stage of incubation had passed. If this case had developed varioloid, as might have happened had the conditions been less auspicious and no warning given, the results would probably have been disastrous to the health and business prosperity of the city.

From the foregoing facts and considerations it will naturally be inferred that the health of the county is good and such inference would be logically correct with one exception, which, though a yearly repetition, I can not conscientiously omit.

The most populous city in our bailiwick is notoriously unhealthy, perhaps unavoidably so from inability to procure a sufficient supply of potable water, and by the contamination of the water in harbor, which is the receptacle of the sewage of the city.

The asylum for the poor of the county was recently visited and thoroughly examined by the writer and found in an excellent sanitary condition.

The County Jail also about the same time was subjected to a visitation and examination and a fair sanitary situation prevailed. All of which is respectfully submitted.

R. O. CRANDALL,
Secretary County Board of Health.

LAWRENCE COUNTY.

The sanitary condition of Lawrence County for the year ending September 30, 1892, has been good.

I could collect no reliable statistics as to the number of cases of la grippe, as it seemed to be the style to call everything la grippe. Two deaths were reported as caused by "grip."

The number of deaths from all causes reported, 120, two of them being from typhoid fever.

Eight cases of scarlatina and one of diphtheria reported, all of which no doubt in mild form, as no deaths occurred.

The sanitary condition of our jail is very bad indeed, but the sickness therein has been but little, although a number of prisoners are confined there almost all the time.

The sanitary condition of the poor asylum has been good. The inmates are cared for humanely by the Superintendent and his wife. They are comfortably clothed and fed, the beds are kept clean, and the halls are free from bad odor. The children are still kept at the infirmary, and associate with all there.

Some few physicians are still careless about reporting births and deaths, and many of those dying without a physician are never reported.

Very respectfully,

H. C. LAFORCE.

MARSHALL COUNTY.

Owing to the heavy rains last spring, filling up all the low places, sink holes and basins—many within the towns of this county—we feared that after the water became stagnated, and the decomposition of all sorts of matter later on, there would follow a great deal of sickness from the unsanitary condition of the surroundings. There was no way of disposing of the water in due time by ditching, as the law requires some time to bring it before the proper authorities. Therefore nothing could be done to counteract this existing evil. In course of time the water disappeared, and the mud dried up, without any sickness being caused from that which had given us much anxiety.

Two or three cases of diphtheria have been reported within the last year, but all contracted the disease while away from this county. Also, a case or two of typhoid fever have been reported.

Scarlatina, generally of a mild form, has been reported from time to time during the summer.

Our county has been kept in as good sanitary condition during the last year as possible, which accounts for so few ailments arising from the neglect of this duty. The people of our county have become so accustomed to cleaning up in the spring of the year that my attention is not demanded only in isolated cases.

The new poor asylum, one and one-half miles east of Plymouth, is now very nearly completed, but will not be occupied before sometime next spring. It is a fine structure, built of brick, two stories high, with basement, and capacity sufficient to accommodate sixty-eight inmates. There are two dining halls, one for males and one for females, access from kitchen to each being direct. No means have been spared to make the sewerage, heating by steam, and ventilation complete.

Two cells for males and two for females have been suitably constructed, in which to confine unruly inmates. The building, with all the necessary belongings thereto, will cost a little over \$30,000.

In disposing of the county farm near Tyner City, with the old, dilapidated building, and erecting the above-named institution on a rich farm, has made some additional expense to the county, but no one who has a spirit of public improvement, and desire to see the most unfortunate creatures on earth properly cared for, will make any objection, and all such, including many generations to come, will ever remember our County Commissioners, Benj. Snyder, Marion A. Bland, and Dan. W. Marks, as instrumental in providing such a worthy institution, and will rejoice to see our people of charity in a comfortable home.

Respectfully yours,

J. H. WILSON,

Secretary County Board of Health.

MIAMI COUNTY.

I am pleased to report the good sanitary condition of Miami County, and the excellent general health of her people.

Typhoid fever, measles, scarlet fever and diphtheria have prevailed to some extent, in a mild form, but at no time approached an epidemic, except in one locality. A threatened epidemic of diphtheria in March last caused some alarm to

the people of Macy and vicinity, and necessitated the closing of the schools for a few weeks.

Our physicians, almost without exception, cheerfully aid our local boards in carrying out the rules and regulations of the State Board of Health.

Respectfully yours,
E. M. BLOOMFIELD,
Secretary Board of Health Miami County.

MONROE COUNTY.

Monroe County is in better sanitary condition than it has been for years, Bloomington especially. Two branches, one running from the northwest, and the other from the northeast, part of the city, coming together in the southern portion, are, to a great extent, walled with stone. When there is a heavy rainfall the streams are quite rapid, and afford excellent drainage to carry off the surface filth. The County Jail and Poor Farm are in fair sanitary condition.

The proprietors of two slaughter houses, situated near a public highway, were indicted at the last term of court for maintaining a nuisance, after being notified by the Health Officer to remove the same.

Our public school buildings are well lighted, ventilated, heated, and kept perfectly clean. The foundation for a new and large school building has been laid, and will be finished in the summer, and, through the good judgment of the School Board, and especially the Secretary, Dr. R. M. Weir, who is a thorough sanitarian, Bloomington will have a commodious structure, built to meet all sanitary laws governing such institutions. The county school houses are also in excellent condition.

Water-works have been built and the pipes on the ground, ready for laying. This will also add to the health of the city.

A limited epidemic of diphtheria occurred in August in the west part of the city, with several deaths. Typhoid fever made its appearance in various parts of the county, though the death rate was not as large as in previous years.

The Indiana State Board of Health will never be brought to a standard of perfection until the system of letting out the office of Secretary of the County Board of Health to the lowest bidder is abolished. A law should be enacted fixing the salary of that officer, in proportion to the population of the county.

Respectfully submitted,
JOHN E. HARRIS,
Secretary Monroe County Board of Health.

MONTGOMERY COUNTY.

The sanitary condition of this, Montgomery, County is good. During the year ending October 31 there has not been an epidemic of any character in the county. There have been isolated cases of diphtheria, scarlatina, typhoid fever and measles, but in no instance could it be called epidemic.

Our County Poor House is one of the best in the State, supplied with water from our excellent system of water-works of this city; supplied with bath tubs, water closets, heated by steam, and, last but not least, is kept in splendid condition.

The County Jail, a most excellent structure of stone, is also heated by steam, and most excellently kept.

The Orphans' Home (thanks to our County Commissioners) has just been greatly improved, making it one of the very best; heated by furnace; supplied with both hot and cold water, boys' and girls' bath rooms, boys' and girls' dormitory, and two sick rooms, so isolated that they are away from noise; and, in case of contagious disease breaking out in the home, there is but little danger of spreading the contagion.

The school houses of the county are in good sanitary condition; water closets (except a few) are placed on the best part of the school yards, and properly cared for.

Some complaint has been made by residents of the smaller towns of the county along our railroads of the stench arising from the stock pens, some of which are situated near the business part of town. The trouble was abated without difficulty, and I have a pledge from the company to move the pens further from the center of villages.

The school houses of this city, four in number, are all in good sanitary condition.

The physicians of this county are somewhat tardy in making reports of births, deaths and contagious diseases, especially is this true in reference to death reports.

Submitted by

WM. B. CHAMBERS, M. D.,

Secretary Montgomery County Board of Health.

OHIO COUNTY.

In making my annual report I will say that the sanitary condition of Ohio County up to September 30, 1892, has been good. La grippe was quite prevalent during the months of January, February and March, and a few deaths reported from it and its sequels. We have had a few cases of diphtheria, scarlatina, whooping cough and measles, but by a strict quarantine prevented them from assuming an epidemic form. The County Asylum is kept very clean, and always in a good sanitary condition. The health of the inmates has been good. Our jail is also in a healthy condition. I learn through the County Superintendent and teachers that our school buildings and surroundings are in excellent condition. Our physicians send in their reports promptly. The law ought to be amended so as to pay each physician a certain amount for each case reported.

Respectfully,

GEORGE A. STEVENSON, M. D.,

Secretary Ohio County Board of Health.

PIKE COUNTY.

The past year the sanitary condition of our county has been good. No epidemic except la grippe; a few sporadic cases of typhoid fever. One case of diphtheria has been reported to this office.

The Jail and Poor Asylum are not in first rate condition, though there has been some improvement during the past year.

The school houses are in a fair condition.

S. R. CLARK, M. D.,

Secretary Pike County Board of Health.

POSEY COUNTY.

The sanitary condition of Posey County during the past year has been better than at any period during the existence of our County Board of Health. Extra efforts were made during the "cholera scare" to get people to clean up and disinfect their premises, with a considerable showing of success. The present sanitary condition of all the public buildings, Jail, Poor Infirmary and Court House, is first class in most every particular, for which we are indebted to our able and liberal Board of County Commissioners, who have taken an unusual interest in the sanitation of said buildings.

There have been quite a large number of cases of typhoid fever (occurring principally in the city of Mt. Vernon) mostly traceable to bad drinking water, and only in part managed by the rules of the Board of Health.

Diphtheria and scarlatina have prevailed only to a limited extent, and have been controlled better than heretofore.

The cholera scare had its good effects in calling the attention of the people to the bad sanitary condition of their surroundings. The death rate has been proportionately small during the year.

Respectfully yours,

D. C. RAMSEY, M. D.,
County Health Officer.

PULASKI COUNTY.

In answer to your letter to furnish a review of the sanitary condition of this county for the year ending September 30, 1892, I will say it is good. We have only had a few cases of contagious diseases, which were properly managed, and kept within limits. Last spring we had an epidemic of la grippe, from which a few cases of death resulted. All public buildings in town and county are considered to be in good sanitary condition. Yours respectfully,

J. J. THOMAS, M. D.,
Secretary.

PUTNAM COUNTY.

Our county has been free from epidemics during the last health year. We have had very few cases of infectious and contagious diseases, and in those that have occurred a strict quarantine and disinfection has been carried out. During August and September we have had more than the usual number of cases of typhoid fever, due, we suppose, to the prolonged drought, and the consequent scarcity and concentration of drinking water. There have been but few deaths from it, however.

Yours truly,

G. W. BENCE, M. D.,
Secretary Putnam County Board of Health.

RANDOLPH COUNTY.

In reply to yours of recent date I will say that the sanitary condition of the county is good. We have had no extensive epidemics during the last year. There have been reported 79 cases of whooping cough, 45 cases of scarlet fever, 28 cases of diphtheria and 8 cases of typhoid fever. Total number of marriages during the year, 304; total number of births during the year, 637; total number of deaths during the year, 309.

The sanitary conditions of the school houses are good, the houses being well-ventilated and lighted. There has been no outbreak of any contagious disease in any of the schools up to the present time during the year.

The Poor Asylum is in a good sanitary condition; the inmates are well taken care of, and every thing in a good, healthy condition. The bedding is clean and sufficient, the food wholesome and plenty.

The Orphans' Asylum is in a good sanitary condition, and the orphans seem well contented with their lot. There has been very little sickness at either the Poor Asylum or Orphans' Home within the year.

The County Jail is kept in a good sanitary condition, is well lighted and ventilated and heated. There has been very little sickness among the prisoners.

The various local Boards of Health, and the people in the county, have taken special pains to keep their premises in a good sanitary condition in order to prevent any outbreak of cholera, and by so doing it has been the means of preventing a great amount of sickness that otherwise might have occurred.

Yours very respectfully,

F. A. CHENOWETH, M. D.,
Secretary Randolph County Board of Health.

RIPLEY COUNTY.

In compliance with your circular letter, I herewith submit my report for the year ending October 31, 1892.

La grippe prevailed throughout the county during the winter months, and was the cause, directly and indirectly, of several deaths, chiefly among the old and feeble, and insanity followed it in a few instances.

Measles have prevailed in some localities, and so has scarlatina, but of a mild form. Our Jail, County Infirmary and public schools are in good condition.

Your request that vinegar sold throughout the county be analyzed was not complied with, for the reason that the Board of Commissioners declined to allow the expense necessary to carry on the work.

It occurs to me that to effectually prevent the sale of adulterated vinegar it would require the entire time of the health officer. He would be compelled to establish rules whereby dealers would be compelled to notify him of each barrel purchased, and he would be compelled to go and make the proper analysis.

The reports of physicians are incomplete in the county, and can not be remedied under existing laws. Neither the Prosecuting Attorney nor the Grand Jury seems desirous of enforcing the law to the extent of prosecuting physicians for neglecting to report cases. The people do not demand the enforcement of the law.

Respectfully,

R. T. OLMSTEAD, M. D.,
Health Officer, Ripley County.

SULLIVAN COUNTY.

In reply to your inquiry as to the sanitary condition of Sullivan County, I have to say that our people have escaped with their health remarkably well any epidemic or contagion of a severe type. About the first of September we had some typhoid fever, but not of a malignant form, and we are now contending with the diphtheria, there having been but five cases reported, and they of a mild nature. Two deaths from this disease have been reported, but both of them I know to have been children who have had tonsilitis from infancy; so I have no fears of this disease proving a very severe general epidemic. I wish to say in praise of our M. D.'s, and also our people, that they are always ready and anxious to hold in check, by quarantine or in any possible manner recommended by the Board of Health, any contagious or infectious disease dangerous to public health. I think the cholera scare has done a great deal of good in that line.

Our Jail is a model of neatness, and I could offer no criticism. It is well heated by furnace, and plenty of water; new and complete in every particular.

Our Asylum for the Poor is situated one mile east, is on a high and dry piece of land, and as beautiful as could be selected for the purpose. The houses, as kept by Mr. Corithers and wife, are in excellent condition. The house for females could be improved considerably in architecture, as it is somewhat old, but the houses and grounds are kept clean and neat.

For the last two seasons we have had trouble with our canning factory and poultry house. They will probably have to move next season, if they prove so offensive as this.

Respectfully,

JOSEPH FREEMAN, M. D.,
Secretary Sullivan County Board of Health.

TIPPECANOE COUNTY.

In answer to your circular letter regarding the sanitary condition of this county I have not much to offer. The health has been exceptionally good. Very few cases of contagious or infectious disease have been reported. All the public buildings are in first-class condition. Active measures have been taken to prevent an epidemic of cholera. The people see the importance of cleanliness, and are working in harmony with the officers to prevent such a calamity.

Very truly yours,

G. K. THROCKMORTON,
Secretary Tippecanoe County Board of Health.

UNION COUNTY.

Aside from a hasty review of the sanitary condition of this county, there is nothing that I can communicate that will enrich or add to the sum of knowledge of sanitation in general.

We have had no epidemics to study, and the few cases of contagious and infectious diseases that we have had have occurred sporadically, and have not been permitted to spread.

At our County Infirmary we had two cases of typhoid fever occurring simultaneously, and two weeks subsequently a third case developed. The water supply, which was from a well, was suspected, and, upon analysis, proved to be greatly contaminated with inorganic matter. The location of the well seemed to be most excellent, aside from its close proximity to the east wall of the building. The use of the water was discontinued, and no other cases developed. The water supply in many of our school districts is not what it should be, and there certainly is a manifest lack of interest in properly securing a supply of pure and wholesome water for drinking purposes. Many wells are very shallow, and exposed to drainage from vaults that seriously pollute the water, rendering it unfit for use.

The school buildings throughout the county are usually large and commodious, and easy of ventilation. The school building in town is a large brick structure located upon the highest point in town (Liberty), and of easy access. A large hall passes through its center, with doors that swing out, rendering escape very easy in case of fire. The rooms are large and ventilation excellent. The building is heated by hot air, and it has proved very satisfactory. The Jail is in good sanitary condition, and our Court House is a superb structure, a model of beauty, elegance and comfort; and while it has these excellencies, it in nowise lacks perfect sanitary arrangements, which add largely to its comfort.

Respectfully submitted,

GEORGE A. SIGLER, M. D.,

Secretary Board of Health of Union County.

VANDEBURGH COUNTY.

In reply to yours in regard to the sanitary condition of this county I would say that we have had no epidemics of any kind. The public institutions, Jail, etc., have been kept in first-class order, and in the city the demands of the City Board of Health have met with more prompt responses than usual.

Respectfully yours,

J. H. KERTH, M. D.,

Secretary.

VIGO COUNTY.

Complying with your request, I make the following report as to health and sanitary condition of Vigo County:

Outside the city of Terre Haute the health has been good throughout the year.

As to this city, I have just made my report to the Common Council, and have been compelled to say that "neither health nor sanitary condition was at all satisfactory." Diphtheria has prevailed here to some extent throughout the entire year. The month of June had the smallest number of cases (nine) reported, while September had reported 132 cases of diphtheria and membranous croup. While the disease can not be said to have prevailed in a malignant form, as only about 8 per cent. of the cases reported terminated fatally, yet the persistency with which it has held on through the various seasons we have been unable to satisfactorily account for. The most probable theory on which to explain our present

epidemic may be found in the unusual amount of street excavation which has been in progress here during the entire year—tearing up old bouldered streets through the old and densely populated part of the city, preparatory to brick and asphalt paving; eliminating and disseminating noxious gases during the hot months, and in some instances obstructing for a time the collection and disposal of garbage, together with a large extension of sewer mains and new sewer connections, with unavoidable escape of sewer gas, may reasonably be held, at least in part, responsible for the origin and propagation of the germs of the disease which has been afflicting our city. Segregation and quarantine rules have been as rigidly enforced as possible. Public schools have been carefully guarded; some whole buildings, and all unsanitary, damp or suspected rooms, have been temporarily closed, and thoroughly disinfected, fumigated, whitewashed or repapered. No public funerals have been allowed from infected houses, and the carriage conveying the immediate family is required to be disinfected before being again used. Our physicians, with few exceptions, have been very prompt to report all contagious sickness.

A. W. SPAIN, M. D.,
Secretary Vigo County Board of Health.

WARRICK COUNTY.

Regarding the sanitary condition of Warrick County, in response to your recent request, I may say that it has been good for the year ending September 30, 1892, with the exception of diphtheria. Of this disease there has been quite a number of cases in the county, with a few deaths. It seems to be of a mild character, so much so that, in many instances to my knowledge, there were cases treated with domestic remedies, the services of a physician not being required.

Our public buildings are in a fair condition, and the health has been very good in the Poor Asylum and Orphans' Home. There have been no deaths in the Home for over six years. The Jail is in fair condition, but is seldom occupied.

Yours respectfully,

D. W. TUCKER, M. D.,
Secretary.

WAYNE COUNTY.

The citizens of Wayne County have enjoyed, on the whole, average health during the State Board of Health year, ending with September last past. In December epidemic influenza began its third consecutive annual visitation, and in its earlier stages was quite severe among aged people, a number of deaths occurring among that class. The disease did not disappear for about four months, and its depressing effects apparently linger among the people yet.

During the summer and autumn an epidemic of scarlet fever was prevalent over the county, and particularly abundant in Richmond and vicinity. The cases were more numerous than I have ever known, and the type of the disease the mildest I have ever witnessed, many cases causing so little disturbance as not to be

accounted illness. Slight fever, some soreness of the throat, and coloration of the skin, were not recognized as scarlet fever until other members of the family came down with a somewhat severer turn of the distemper, when a physician, being called, advised them of the nature of the disorder. With hundreds of cases, I do not think there was a single death from scarlet fever, pure and simple.

Preceding the outbreak of scarlet fever diphtheria was more prevalent than usual, and caused a number of deaths, and though subsiding somewhat on the appearance of the scarlet fever, there was a recrudescence of it as the latter disappeared, and the increase continued to the close of the year, the severity of the attacks being above the average.

Within the last month there have been more cases of cholera morbus than usual, and of greater severity, several deaths being due to this disease, and, in a modified form, it continued to the end of the year.

Beyond the foregoing instances, no unusual conditions of morbidity have obtained among the people of the county. We must suppose the presence of specific morbid poisons for at least the influenza, the diphtheria and scarlet fever, but there is no reason to infer that either of them was due to a general unsanitary condition of the county, for, so far as I am able to judge, the sanitary condition of the county for the year has been, and is, above the average, but this should not be taken to signify that it is as good as it might be.

Respectfully submitted,

JAS. F. HIBBERD,

Secretary Wayne County Board of Health.

WHITLEY COUNTY.

Complying with your request for a review of the general health and sanitary condition of this, Whitley, County, I have this to report:

For the year ending September 30, 1892, the general health of this county has been good. In February there were a number of cases of scarlet fever in Thorn-creek Township. The schools in the districts where the disease occurred were promptly closed, and the families in which the disease occurred quarantined so that the disease was confined wholly to the families in which the disease first occurred. There were thirteen cases in all, with two deaths.

La grippe made its appearance during the winter season, and was more severe than during its former appearance. Five deaths were reported from this disease.

Typhoid fever appeared in different parts of the county, but not in epidemic form, and with very few deaths.

We have had a mild epidemic of diphtheria in Columbia City. The first case was discovered about July 5. About the middle of August a case was discovered in the Second Ward School opened about the 12th of September. The disease was carried to the school house, necessitating the closing of the school for one week. The school reopened for one week, and was closed another week. The School Board and citizens did all that could be done to arrest the spread of the disease. Every family infected, as soon as discovered, was at once quarantined by the Secretary of the City Board of Health. Number of cases of diphtheria in

Columbia City, seventeen ; number of deaths, six ; sanitary condition of the city, good, the citizens living up to and obeying carefully the orders of the City Board of Health.

The sanitary condition of the County Prison is good, with three prisoners, and none sick. The sanitary condition of the County Farm and Asylum is good. Number of inmates at present, thirty-two ; number of sick, five ; number of deaths during the past year, two ; general average of inmates for the past year, thirty-three. The County Physician is urging the County Commissioners to build a hospital annex to the County Asylum, with fair prospects of being granted.

The County Board of Health has been energetic in urging people to keep their premises in good sanitary condition during the hot and dry season of the year.

Whitley County's drainage system is good. Eel River will be dredged next year, which will drain nearly all the wet land in Whitley County.

All the school houses in this county are good, substantial buildings, made of brick. They are located with a sanitary view, being on high and dry places. For the most part they are supplied with water obtained from tubular wells.

On the whole, this county and city will show as good an average sanitary condition as any county in Northern Indiana.

Respectfully submitted,

O. V. SCHUMAN, M. D.,
Secretary Whitley County Board of Health.

ON THE NECESSITY OF A DEPARTMENT OF PUBLIC HEALTH.

BY S. E. HAMPTON, M. D., MILTON, KY.

Everybody is familiar with the old yet truthful maxims that "An ounce of prevention is better than a pound of cure," and "Public health is public wealth." But we are not so certain that even a majority are familiar with the best means to employ to obtain the greatest of earthly blessings—health.

It required many years and overwhelming proof of its efficacy to bring vaccination into general use. And even now it is neglected by millions of the human family, though no one familiar with the facts doubts for a moment that small-pox could long since have been wiped out of existence. Here the inquiries arise, "What are the best means to prevent diseases?" and "How can a knowledge of these means be obtained and best employed to promote public health?" The object of the writer is to attempt, though feeble may be his efforts, to answer these all important questions.

Jenner proved that small-pox could be prevented. This was certainly an immense stride in the right direction. Pasteur has proved that the deadly bacillus-anthraxis could be rendered *hors de combat* by inoculation, and the loss of millions of dollars annually in Europe by the cattle plague could be prevented. This, too, was a great achievement.

The German government said to Robert Koch, "We demand that you, our paid servant, discover the course of consumption; draw upon our exchequer to supply you with whatever you need to accomplish the object. We know there must be a cause of this slayer of over six millions of the human race annually. We command you to discover it." And it was done. To-day Robert Koch holds up to our view the tubercle bacillus as the murderer of more people than any other Cain upon the face of the earth.

But we have not so far derived scarcely a modicum of the benefits which these three great discoveries should have afforded us. It has been nearly two hundred years since Jenner made his first arm to arm inoculation, and yet the mortality from small-pox is very great. It has been nearly a quarter of a century since Pasteur proved the efficacy of inoculation to prevent the cattle plague, yet the loss continues to be immense. It has been ten years since Robert Koch thrilled the world with the announcement of his discovery of the tubercle bacillus, yet to-day the victims of consumption are legion.

There is something wrong, lacking. Few people desire to die, yet it is extremely difficult to induce them to employ means to ward off or destroy the cause of death. I have encountered the greatest difficulty in securing thorough disinfection of the person and clothing of school children before re-entering school after recovery from scarlet fever and other communicable diseases, and still greater difficulty, if possible, to secure the proper disposal of tuberculous sputa, typhoid dejections, etc. I feel confident that I but voice the experience of the profession at large in these statements. Why is it that we make no more rapid progress after the way is thus opened up to us? Can it be a selfish indifference, a want of interest in the welfare of our fellow beings? Surely not. I will be more charitable to charge it all up against negligence. True when we are attacked by the demons of cholera or yellow fever people fly hither and thither in wild dismay

and cry lustily for the profession to step in between them and the destroying angel. But, sir, this is not as it should be; "In peace we should prepare for war." Let the people be educated upon the vital importance of prophylaxis.

Let them realize that the profession is willing to do its part, but without their support it can do but little. Let them demand of the Government a recognition of their absolute needs. Look, sir, at the millions upon millions of dollars spent annually by our Government for—what? Look, sir, at the empires of the public domain which has been given away for—what?

If pleuro-pneumonia appears in a herd of cattle every effected animal is at once slaughtered, the herd securely isolated and the Government pays the bill.

Is not a human life of more consequence than that of an animal? Not in dollars and cents I will admit. But where is the man so ignoble, so base, as to vote for an appropriation of the people's money to protect dollars and cents of his friend owning sick cattle, and refuse to vote for guarding the sacred homes of his people from the ravages of preventable diseases?

Look, sir, if you please, at the Department of Agriculture. It has four statistical correspondents in every county in the United States, to whom monthly reports of the condition of stock and crops are sent ostensibly for the benefit of the farmer, but really for the benefit of those inside the ring. Look at our Consular reports published monthly at a cost of more than a million dollars annually and sent out broadcast for political effect.

Look at the field, garden and flower seeds sent out every year at a cost far greater than the farmer could buy them at home.

Look at the millions spent for public buildings, bridges, locks and dams, dikes, lights, etc. Do I complain? Of course not. But, sir, the time has come when the necessity for a concerted and persistent effort to protect the lives and health of the people is so apparent and the demand so urgent that we, as the conservators of the public weal, must be up and doing.

As individuals we can not cope with the vastness of the undertaking. We have not the means at our command, neither the time to spare. But let this great Government of ours take hold of it.

Do we not boast of equal rights and exact justice to all in the protection of our people in their "lives, liberty and pursuit of happiness?"

But who is he so bold as to insist that this Government affords equal and exact justice in the protection of the lives and health of its people to-day?

Does this, the greatest, the most prosperous nation on earth protect its people from the criminals, the inebriates, the lunatics and idiots which are being cast upon us by the thousand from foreign countries to fill our jails, penitentiaries and asylums? Why, sir, it is one of the marvels of this marvelous country of ours that we have so long been able to receive, digest and assimilate that vast amount of poisonous material without producing degeneration or the worst form of dyspepsia in our own corporate body.

Why talk so loud about our rivers becoming contaminated with the typhoid bacillus while these pathogenic bacilli are pouring into our social system at such a fearful rate and taking from us millions of our hard earned dollars to support institutions for their benefit and accommodation?

We need the strong arm of the Government to enable us to abate these and all other preventable evils. We need a Lieutenant-General in the healing art at the head of a Department of Public Health, who shall command men and money. By men I mean men—not things. By money I mean a sufficiency.

Let it be his duty, not only to employ adequate means to arrest epidemics, but also to prevent the spread of communicable diseases whatever their nature may be. Let him establish laboratories for original experimental research, so that we can take up the questions of the tubercle bacillus for instance, and endeavor to discover a means to destroy the morbid material without destroying the patient.

Let scarlet and typhoid fevers, diphtheria, etc., have a place under competent men. Let there be sanitariums established for all chronic diseases with adequate means for studying the *modus operandi* of their cause. Let there be competent and well trained sentinels over the health of the people as policemen now stand over their behavior.

What a vast field lies out before us awaiting the husbandman. "Where is the money to come from" did you say? Out of the thousands and millions of dollars appropriated, I had almost said squandered, by our last Congress, don't you think there might have been a few dollars saved for a purpose as noble, and as much if not more needed than our dykes that receive only the warmest and heart-felt curses of our boatmen? Do you not think that the money required to build so many custom houses all over our country could have yielded better results if spent in building sanitariums and providing for the needs of our destitute and homeless, our sick and afflicted and our widows and orphans? Instead of spending millions to run the Department of Agriculture in the interest of our bulls and bears in our gambling pits, don't you think a greater good to a greater number could be accomplished by shutting out small-pox by enforced vaccination; by shutting out typhoid and scarlet fever, diphtheria, cholera infantum, measles, etc., by enforced disinfection and isolation?

Don't you think the many millions of money of our Chicago World's Fair could have done more good had it been spent in providing summer homes for the little destitute children of our large cities?

Why, this little controversy about sealskin cloaks has already cost more than enough to care for a thousand homeless innocents for a year.

If the same energy, determination and money were employed for the prevention and cure of disease for the next ten years, as has been spent for political supremacy during the last ten years, our sanitary condition would be unsurpassed.

This is a very important, though neglected subject. A great weight of responsibility is resting upon us. We are by right the conservators of the public health. The people confide in us, but do we merit this confidence?

They look to us for safety; do we afford them protection?

They call upon us for advice; are we able to give it?

We proclaim that the people should be educated upon sanitary science; are we ourselves adepts in it? We need a reformation in our own ranks. Let us step up onto a higher plane. Let us get out of the quagmire of selfishness.

Let us work for the good of our fellow beings by doing all we can to secure for them the benefits of sanitary science, prophylaxis and therapeutics in their broadest, highest and most comprehensive sense.

Let us impress upon the people the well known facts that in the scale of animated nature, from the lowest to the highest forms of life, the one preys upon the other, that one life is sacrificed to sustain another life until we come up to man, "made in the likeness and image of God, and given dominion over all the earth and every creeping thing," thus plainly showing that the God of nature never intended the human race to be devoured neither by the beasts of the field nor the micro-organisms of air or water.

Let the people understand that a thorough knowledge of the cause of disease must lead to a knowledge of its prevention. That it is beyond our comprehension to conceive of an effect without a cause; that disease is only the effect, and if the cause were removed it would be utterly impossible to have the effect.

For instance, if the cause of small-pox was entirely destroyed we could never have another case of the disease on earth unless the creator of all things created another cause. In other words, let the people understand that these micro-organisms should destroy each other, but not allowed to attack the human race, and in order to guard against their attacks we must become acquainted with their mode of warfare, with their peculiar tactics, which enables them to gain admission into our systems unawares while our sentinels are slumbering in the darkness of ignorance.

When the people are brought to understand these things they will demand of Congress to at once take hold of the matter and see that the decrees of Magna Charta, granting protection to our lives, are strictly executed.

Everybody is discussing the tariff and free coinage of silver, and at the same time the consumptive is allowed to deposit his tubercle bacillus-loaded sputum upon the floors of our homes, streets, railroad, cars, steamboats, etc., to be dried, pulverized and disseminated in the air to be inhaled by the unsuspecting throng, and thus the disease is rapidly increasing until now over six millions die annually from consumption.

Typhoid dejections are thrown upon the ground or into sewers, without a thought of the many lives that may be sacrificed by the germs finding their way into the system through the water drank, which has received them alive and ready for another victim; and so with many other diseases. We ought to know not only that these diseases are thus transmitted, but also how to prevent these and all other preventable transmissions; and then be compelled by the strong arm of law, if need be, to prevent them.

Every physician should be compelled to report every case of communicable disease to the proper authorities who in turn should be compelled to isolate the patient and destroy the materies morbi of contagion in order to protect others from a preventable disease.

"Eternal vigilance is the price of liberty," and is equally applicable to health. Millions are spent annually for the protection of "infant industries," while scarcely thousands are spent to protect the public health. This is not as it should be.

Then while "*Epluribus unum*" may properly be the motto of our country let us inscribè "*Pro bono publico*" upon the banner of our beloved profession and enlist for life beneath its folds, devoting our best energies to its cause until it is firmly planted over every city, town, hamlet and home in this great and glorious country of ours.

CONSERVE LIFE BY OBEDIENCE TO LAW.

BY J. S. ARWINE, M. D.

The conservation of life does not necessarily nor exclusively belong to medicine in its range as a science, nor is it confined to those who study and practice therapeutics as a healing art. It belongs equally to every individual member of society. Therefore, it is equally important to those who occupy the highest and lowest stations in life, and they alike are deeply interested in its conservation. It has been said that a good citizen was, of necessity, a moral philosopher, pure in all his thoughts and ways, which could only be the operation of a pure body and a sound mind, a condition which is absolutely impossible to find with our present environments or impure surroundings with which the people must come in contact. Hence, mankind are mentally, physically and morally deficient.

But we can not, as individuals, change the long established customs of the masses, but in a measure we may make our individual lot more comfortable by thoroughly familiarizing ourselves with the ills that are associated with the various customs of our day, then if we can not help the masses we may, as individuals, assist in bettering the general condition of mankind.

Some one remarked that as we toil on toward a higher civilization we encounter difficulties which, in the main, are caused by our imperfect sense of right, which must ultimately pass away and leave more healthy surroundings, in which God bids us use our energies in securing new power from new views which are developed by the advance of civilization. But if civilization is advancing to a higher plain, and, as some say, an increase of miseries or human ills, what are we to expect? that the more enlightened pursuits of civilization have and will continue to increase, in a sense, the duration of human life.

However, we recognize the fact that there are many errors in our customs and practices that need and must be corrected, and many erroneous conclusions are adopted and acted upon by the people will undoubtedly be changed by the advance of civilization, which will enable the people to reach a higher plain where equality will be more common and more intelligent views will be entertained and practiced in the conservation of life rather than efforts to push and outstrip fellows in accumulating the almighty dollar. And the literary and intelligent pursuits of the last four or five decades which have done much to drive thousands to premature graves, as well as to fill the land with devitalized men and women, whose children become a burden to society, as they have no energy or ability to enter the arena of life and contend successfully for the monetary prize which the present age or state of civilization is considered, an evidence of a successful life. One failing in this is considered to have made a failure of life, but when we soar through all the range of thought we are unable to conceive of a thing that did not have a beginning. In fact, Christianity teaches the personality of God and lays the foundation from which all true progress springs, whether moral or intellectual, and it fixes the point from which philosophy starts and it directs man to a resting place for his affections. From the Christian Bible we obtain the only reasonable and satisfactory extant of the origin of our race. From its sacred pages we learn man came from God, the everlasting Father who made the world with its abundant treasures and bedecked it with beauties that the wants of His children might be amply supplied and their affections lifted to him in adoration while their hearts were bowed

in submission to the law of a parent, who had not only provided for their wants, but made them superior to all other creatures by creating them in his own image and likeness.

Therefore, they must have been perfect in body and mind, in which condition they were placed in a garden of delight prepared by God, the Father, who gave them dominion over all earthly things. Here they were unrestrained in the exercise of free will power, because equality, justice, mercy and modesty were sustained by that something called natural law.

In this home of innocence and love, God, the Father, conversed with and instructed his children in the conservation of life, but then, as now, children were disobedient, and they erected an altar of selfishness upon which they sacrificed their inheritance and life by turning a deaf ear, or disregarding the council of their Father, God, as the children of men disregard the advice of their fathers nowadays, who unquestionably try to inform them in the conservation of life.

And still they pursue a downward course regardless of its tendency to moral degradation with all its physical results and possible disastrous ending, and the effect it may have upon the human race, about which sanitarians, humanitarians, sociologists, physicians and statesmen have become solicitous throughout civilization, but so far, their efforts have apparently been attended with but little success in the way of arresting the downward course of man, which has undoubtedly caused the race to become unstable in all its ways and purposes.

However, we are of the opinion that a deep and broad study of man in all ages points to a line of God's purpose, which runs down through the generations, which is faintly discernable, but which will grow brighter and brighter as it passes through succeeding generations, until it ushers in millenium day glory and demonstrates the survival of the fittest. But at present to us the future is veiled in mystery or hidden in the bosom of coming time, which to us is a *terra incognita*, an unexplored continent rendered more dark and mysterious by the traditions and superstitions of our ancestors and the sectarian doctrines that have been more or less forcibly impressed upon our minds since childhood, and tended to thicken the almost impenetrable gloom which hangs like a pall over the future.

Therefore, men are turned about by every doctrine put forth, or by every theory offered or explanation given in regard to the future of man, all of which are unworthy of consideration only in so far as they are in accord with the teachings of the Scriptures. Therefore, it becomes us to study with care the Holy Bible that we may familiarize ourselves with its teachings, and not allow our opinions to become warped by early impressions and environment which often suggests the course pursued in life and gives selfish desire the power to control the actions, rather than a manifest desire to render obedience to law in the hope of conserving life.

But we live in a progressive age, and at a time of great mental activity, when education and general information is more common and widespread among the people than at any time of which history speaks, and in our days or time the arts and sciences are better understood by the masses than ever before in the history of the world, and inventive genius is more prominent and doing more for the people in the production of labor-saving machinery and scientific instruments than ever before. Labor is both lightened and expedited in most branches of industry, and the arts and sciences have advanced beyond the expectation of the most sanguine scientist of the first half of the nineteenth century.

And the instruments and scientific apparatus invented for the use of the medical profession has enabled physicians to treat with success quite a number of

patients that a few decades since would have been pronounced incurable by physicians who were thoroughly posted in the details of their profession, and enjoyed the reputation of being competent diagnosticians, who left them to linger out a miserable existence.

But of recent years the microscope has been placed within the reach of students in the humble walks of life who were anxious to obtain scientific knowledge, and they are earnestly investigating growths and structures, efforts to pry into nature's secrets, until they have become experts in the use of the microscope, and are able to detect the slightest change in structure, as well as the most minute organisms, such as are now generally regarded as the cause of diseases, especially of contagious and infectious diseases.

And in order to demonstrate the correctness of this scientific theory animals have been inoculated with fluid which contained special organisms by which the same disease is produced any number of times in different animals, and scientists say that by cultivation or propagating these organisms in culture fluids a number of times they become so attenuated or sterilized that they will produce only a slight indisposition, but sufficient to ward off attacks of the wild, uncultivated and dangerous micro-organism.

The scientific knowledge or attainments of to-day is such that scientists arrogate to themselves the ability to account for almost everything, and offer a remedy of their own. They even try to change the law of nature and produce rainfall when and where it may be desired.

The science of chemistry has become so thoroughly understood by careful, painstaking students that they are able to separate and divide every tangible thing that comes under their observation into its original or primary constituents, and give the atomic weights, or combining numbers according to natural law.

The people have become accustomed to seeing things changed not only by art, but, in an imperceptible way, by natural law, until they have learned to look upon matter, in whatever form they find it, as unstable, and when they study it in mass, or in any of its separate forms, they expect to find it in a state of change, living, dying, reviving or decomposing into its original elementary parts, which are capable of eluding their pursuit, and of escaping from their sight.

Here, then, whether scientist, chemist or in the humble walks of life, they stand amazed and wonder, as neither can tell where the elementary parts have flown when set free from their visible combination; neither of them knows whether the elementary parts have gone to recombine in new forms and energies in a purer and more enduring mode of existence.

In our present mode of existence, with our present environments, we know the purest metals tarnish, and the most solid rocks will crumble into granules or sands, and the sands will decompose; so there is no trace of the original rock left to tell that such a form ever existed. But we naturally suppose the elementary parts which originally composed the rock are appropriated by nature to the building up of other forms, and, so far as we know, a similar metamorphosis may be taking place in the organized world, as we know animals and vegetables moulder into one common mass, and may possibly form material for sustaining or upbuilding of a more perfect and enduring generation of animal and vegetable life.

To an ordinary observer unrest must appear common to all earthly things, since God cursed the ground for man's sake, as everything seems to be striving to burst the bond that binds it to this sin-cursed ground—appears to be seeking a

place where all environments are pure and untainted by the result of disobedience to law, which is disease and death.

However, the old philosophers taught that matter was essentially corrupt, and they taught this was the reason why all visible things were found in a state of change, or why all visible things were imperceptibly changing their visible appearance, and they claimed this was the reason why moral and physical evils were experienced in this world. If I have read history correctly, this was the teaching of some of the most renowned schools of ancient times, and the idea has been transmitted to our days, as there are men among us of scholarly attainments and, perhaps, skeptical proclivities who claim the foregoing theory is the best evidence that can be adduced of the goodness of God, and that it proves His beneficence as a creator who made the most out of matter that it would possibly admit of, and that He tempered it with goodness as far as possible.

This hypothesis presupposes the existence of matter from all eternity as an independent substance or principle out of which all things grow or was made by God, and of necessity with an innate tendency to disorders or diseases and death.

The foregoing hypothesis is undoubtedly an outgrowth of scepticism, though but little more so than the living germ theory of diseases, which of recent years become popular not only with the profession, but the laity. The most ardent advocates of this theory teach that organisms and their ovas or spores are found everywhere, and in everything, whether animate or inanimate, ready for the development and propagation of their species at the first favorable moment. If this be true, we have the reason why certain diseases appear in childhood, adolescence and age, as it demonstrates the fact that the human body is simply a *nidus* for the production of innumerable colonies or species of micro organisms, which are developed when their incubative periods roll round, and of necessity produce the disease peculiar to the species, and establishes the fact that diseases are unavoidable, as their exciting cause is a part of the woof and warp of the body.

But this living germ theory is ingeniously arranged and it presents a tangible cause for diseases and as the profession has always been at a loss when attempting to point out the cause of disease, they accept the germ theory readily, as no tangible cause has ever before been given for disease, the human family have always been unwilling to admit that diseases were the result of disobedience by their ancestors, and themselves.

In adopting the foregoing germ or microbe theory of diseases the medical profession does not bear in mind the fact that nature uses micro-organisms to alterate or reduce impurities to the consistency of mother earth, that her strength may be maintained, and she enabled to bring forth an abundance for the sustenance of her children.

Then this living germ theory is calculated to cause its advocates to ignore the fact that matter in all forms bears the impress of divine wisdom, and it marks the road that leads from impurity to purity, from darkness to light, and life eternal, so plainly that all intelligent beings may follow it through nature up to nature's God, who requires no impossible thing of His creatures, but demands simple obedience of them if they would live and enjoy a life free from disease and death. A careful study of organized forms confirms the foregoing opinion, as many of them appear to be perfect in their kind and have the appearance of having been capacitated for incorruption or infinite duration. For illustration we will direct attention to the granite mountains which appear to form the lowest depths and highest points of earth, and seem to have resisted the vicissitudes of time with but little evidences of change; but it may be that matter in liquid and gaseous form

offers still stronger evidence of indestructibility, though search as we may, or where we will, and we are not able to find an object that does not bear evidence to the fact that change is going on, though it may be imperceptibly, and is in most instances in every visible thing in obedience to natural law, which is inexorable, and still, man endowed with reasoning power and all this incontrovertible evidence spread out before him, and at every turn in the path of life persist in following the dictates of his own sweet will, he regards no law that restricts his selfish desires.

And still man delights in following the foot prints of his ancestors, whose disappointments and failures they have been taught by tradition and history, evidence that is unimpeachable, and should cause a thinking man to study well the course he pursues in this life, if not for his own good, for the good of his posterity, thereby helping in the gradual emancipation of the race from the taint of heredity, that they may ultimately keep their cheeks painted with the perpetual bloom of youth, and protract their lives indefinitely by implicit obedience to law.

No one will controvert the assertion that man is endowed with wisdom enough to enable him to improve his physical condition in life, and there can be no good reason offered or cause shown why divine wisdom has not made it possible for man by rendering obedience to law, to gradually and imperceptibly regain purity through obedience to law, though after the lapse of centuries we find man groping his way through the thick darkness of ignorance, handicapped in the race of life by the acts of those who lived before they were born, dwarfed both in body and mind by the selfishness of their parentage, though, in most instances, parents desire their children to live that they may enjoy old age, while they sadly neglect to teach them, by precept and example, that obedience to law offers the only hope of securing good health and long life.

Therefore only a small minority of the children born live to realize the ardent wishes of their fathers and mothers, about four-fifths of all the children born are carried off by death before they reach three score and ten years, while those who live to be seventy and over usually have but little left to them save labor and sorrow, the milk of human kindness to them is mostly sour and the bright cheering rays of the sun of life is hidden or overcast by clouds of adversity, and at this time of life strength has failed and they are unable to contend successfully with the obstructions found in life's pathway.

A sad and lamentable condition to confront man endowed with wisdom next to God, the Everlasting Father, Who provided a garden for man's inheritance and gave him dominion over all earthly things, all of which he forfeited by disobedience to law and even life, and placed his prosperity in a downward course in life, which has carried them down into the basement of God's creation where they now stand appalled when they call to remembrance man's first estate in which he was placed with a capacity to live coeternal with his Father, God, Who no doubt has made it possible for man to retrace his downward course, that he may imperceptibly emancipate his posterity, or erase from the thralldom of hereditary and enable them to safely conduct or direct their bark back over life's troublous sea to that haven or edenic port from which it was driven by the first act of disobedience committed six thousand years since, and the zigzag course it has traveled may be followed by the sighs, groans and tears, and the marks left by disease and death wherever the habitations of man is found upon the earth. But to find a way of escaping the penalty of disobedience, man has been on a voyage of discovery for the last six thousand years, a long tiresome or weary journey to be attended with nothing but failure and disappointment, but with all this discouragement man is not yet willing to yield, but apparently with courage undaunted he keeps up the

weary searching, as if determined to find a way of escape or a remedy with which he can purify himself and banish disease and rob death of its sting, and banish from the mind the horrible thought that man must die and lay his warm sensitive body down where it will become a moulded clod.

What is more horrible to the mind of man than the thought that there is no way of escaping our mortal enemy, to think the monster grim Death must fold these warm, sensitive bodies in his leaden arms, and hug them close to his clammy breast, is repugnant to every living being, and explains why sages and philosophers have formed no word of welcome for death, and the reason why the aged and infirm do not welcome Death as a friend when he comes. We know the sick do not call Death as their last and best physician, nor does the Christian who professes undoubting faith smile at Death's approach. Pray tell me why this shrinking, this innate dread of death, if it is natural. If, as we are taught, we were born to die, I can not understand why we should shrink from the ordeal or change. If our teachings are true, it is a mystery that all living things try to avoid death. May we not regard this as an evidence that there resides in every breast an innate consciousness that a possible way of escape has been provided by Divine wisdom that may be followed by obedience to law.

To impress upon the mind of his children the power of obedience to conserve life inspired men have given us the Bible record, in which we find two individuals escaped death through implicit obedience to law, and to impress our minds with the possibility we are told in the New Testament that all shall not die, but they shall be changed. How, we are not informed, but suppose it will be from impurity to purity through the operation of natural law and obedience which conserves life.

Every observing individual surely recognizes it as a fact that unperceived change is going on in all visible things, whether animate or inanimate, while the better recognized changes in man is growth and decline, supply and waste, which must be regarded as nature's manner of purifying the human body in order to conserve the life which is gradually carried on in an imperceptible manner, in obedience to law, and would undoubtedly with good painstaking care on the part of the individual protract life indefinitely.

The most inattentive observer recognizes the fact that many changes in the customs and practices of the people have occurred during the past half century; new views of truth have been opened, or light has been shed upon their purport by advancing civilization, which has added value to life, and more zeal has been infused into the people, and they are making more effort to conserve life than ever before.

Therefore we have great reason to believe that advancing civilization will soon adopt a system of thorough purification, which will be more and more perfect until the world is prepared for the dawn of millennial day, when Christ will come again and reign a thousand years on earth with his saint. Then will the survival of the fittest be demonstrated on earth, for there will then be no sickness nor death. Man will have subdued the earth and regained his primitive condition in obedience to law, and life will be conserved, and equality, justice, mercy and modesty will again be sustained by that intangible something denominated natural law.

THE WATER SUPPLY OF THIS AND NEIGHBORING COUNTIES.

S. R. CLARK, M. D.,
Secretary Pike County Board of Health.

When the first inhabitant came to this country he often passed by the more fertile lands and selected his site for a home near a water supply. He did not ask about the quality of the water. He did not know that the water he drank might carry the germs of some fatal malady.

A spring of water coming from under a hill was to him something of great value. Often he was satisfied with a brook or creek, though he might have to carry his water a considerable distance.

If he could not get near a spring, or the brook ran dry or was too great a distance from his location, he dug a hole in the ground, "curbed" it with boards fresh from the forest and then called it a well. Or he dug a hole of larger diameter, but not so deep, covered the top with slabs of wood and these with earth, conducted the rain that fell on the roof of his dwelling by means of a trough of wood, and then called it a cistern.

The spring might come out from a rocky hillside or up through the sand. It was often impregnated with some mineral salt and more often contaminated by decaying animal or vegetable matter.

The creek annually received the leaves from the overhanging forest and at all times was being contaminated from various sources. The water in the well soon caught a flavor from the curb. The cistern was filled from the earth and the roof of the nearest building during the rainy season. When the dryer months came the cistern was exhausted and the well often empty. Sometimes they were replenished from the nearest creek.

Thus did the early inhabitant supply his household with water. As the years went by there was some improvement. Occasionally rock or brick were used in the construction of the wall. Now and then some prosperous ones walled and cemented the cistern and caught sufficient water during the winter months to last through the remainder of the year. In time most of the springs were changed for wells and the greatly improved health of his family first taught the inhabitant that water might be responsible for a great many ills. Only a few days ago a lady, past her three score years and ten, pointed out the well that had taken the place of the spring forty years ago. The family had from its first settlement on the spot used the water from a spring that came out from under a hill and had chills and fevers almost continuously. On changing from the spring to the well they were given a new lease on life.

Often the well was as unwholesome as the spring. The healthfulness of the water was not considered when the site for a well was selected. If the constructor had faith in the "water witch" the services of said individual were in demand. If not, he consulted his convenience, even though the well must receive from its location the surface water every time it rained. Was there a prospect that he might have to go down a considerable distance to find water, he went to some hollow where there was promise of his reaching it sooner, no matter though the wife spent her resting hours in bringing water up the hill. At this late date the spring still flows and there are those whose thirst is never so thoroughly quenched as when they drink from its sparkling stream.

Occasionally may be found the well with its wooden wall, but the great majority of the wells are walled with brick or stone. Rarely do we find a cistern as a source of drinking water. In the early days almost the entire population suffered from intermittent and remittent fevers. At this date only a fraction of the number of cases are seen. This is, in a great measure, due to the improved water supply. Many of the disorders of the stomach and bowels seen at this time are due to the impurities contained in the water used. I have seen typhoid fever in the same locality year after year that could be traced only to the water used.

Though the water of the present is a great improvement over that of the past it will admit of further purifying. I would urge the increase of properly constructed cisterns. They should be of sufficient capacity that enough water may be caught during the winter months to furnish a supply the remainder of the year. They should be walled and cemented throughout. The water should be filtered when run into the cistern, and to insure thorough filtering the filter frequently changed. The first rain of a shower should not be caught.

DISINFECTION.

BY J. F. HIBBERD, M. D., RICHMOND, IND.

There are only two ways to arrest the spread of contagious diseases: First, to prevent the contagion coming in contact with people. Second, to have people in such condition that though coming in contact with contagion they are able to resist it.

People of the second class are such either by nature or by artificial preparation. A considerable number of persons in every community are exempt all their lives from such contagious diseases as visit their neighbors, due to some natural condition of which we know nothing and which we can recognize only when such fortunate ones have passed unscathed through repeated epidemics.

Fortunately, one attack of certain contagious diseases confers immunity against a subsequent attack of the same, for example small-pox, yellow fever, typhoid fever, measles, mumps, and the like. Exemption thus conferred is not always absolute, for second attacks of each of them have been observed, and occasionally, even a third or more. But the rule is that in the diseases referred to one attack makes the victim immune from further attacks.

In the case of small-pox, perhaps the most generally contagious disease among humans and one of the most fatal, we have a means of prevention in vaccination, that is, by producing cow-pox in a person we secure such person against small-pox as certainly as small-pox secures against itself.

Experimental investigations are now going on in various parts of the enlightened world that promises to establish means of preventing other contagious diseases, but at present it is only a promise and we must rely on existing knowledge for preventing the spread of contagious diseases until these investigators have made further progress.

Existing knowledge demands that a person attacked with a contagious disease should be separated at once from other persons liable to the disease; that is, placed

in quarantine, as it is called. In private families this consists in placing the patient in a room that can be shut off from the other parts of the house and kept there until he is well of the contagious disease, and meanwhile no one should be admitted to the room except the nurse and the doctor. This quarantine room should be prepared for the occasion by stripping it of carpet, curtains and all fabrics not necessary for the welfare of the patient. All bedding, towels and other fabrics used about the patient should be disinfected as soon as they cease to be used either by boiling or soaked in a disinfecting fluid. When the patient has recovered, and after proper bathing is dressed in uncontaminated clothes and discharged, the room must be disinfected and while there are several methods of doing this the most feasible one for private families is sulphur fumigation. To do this stop up every hole, crack and crevice in the room, giving particular attention to windows and doors. Hang the bedding, clothing and all fabrics needing disinfection on chairs, bedsteads, hooks or nails or in any way that the air can get on all sides of them—nothing should be in rolls or close bundles. Place a common wash tub in the room and in it put four or five inches of water and in the water bricks that will support an iron pot, just above the water. In this iron pot put broken roll sulphur, three pounds for 1,000 cubic feet of space in the room. Suppose a room is 14 feet square with 10 foot ceiling, this would contain 1,960 square feet and would require six pounds of sulphur. Hang some wet sheets, towels or other fabrics about the room. All being ready pour a little alcohol over the sulphur to insure a good start to the burning, touch a match to the alcohol, hasten out of the room and close the door. The sulphur will burn until all the oxygen in the room is consumed, the atmosphere will be displaced and the room filled with fumes of the burning sulphur and this will kill every living thing which is immersed in it. Keep the room closed for say four hours, then open, ventilate and clean thoroughly as you would any other room that was foul and dirty.

If these directions have been effectively carried out such a room may be occupied at once with as much safety as though a contagious disease had never been in it.

ABATEMENT OF NUISANCES.

The law of Indiana is very broad in relation to nuisances. The statute provides that not only things inimical to health are nuisances, but also anything that is offensive to sight or smell or hearing, or that interferes with one's rational enjoyment of life, is a nuisance, and whosoever is responsible for its continuance can be punished, and compelled to suppress it. But the opinion of one person does not establish a nuisance, its existence must be proven by testimony competent in both character and quantity. A suit to abate a nuisance is of the nature of a criminal prosecution, and the rule of law gives the benefit of every doubt to the prosecuted. Let us suppose a case.

My neighbor has a hog pen three hundred feet west of my house on his own ground, and on a calm summer evening, when the air flows from the west, as it is apt to do, the odor is exceedingly offensive to my family. I file a complaint against my neighbor for maintaining a nuisance, and he is brought to trial. I prove the offense by myself, my wife, my 20-year-old daughter, and the young man who takes care of my daughter on Sunday evenings, but my neighbor proves by his family that he has but four hogs, and they are quiet and orderly, their pen is kept clean, and nothing avoidable that might create a bad odor is permitted about the premises. Three other families living north and west and south of my

neighbor about the same distance I do testify they find nothing offensive about the hog pen, and two young men whom my daughter had discarded swore they had visited at my house of evenings, and never experienced any inconvenience from the hog pen. The jury was out but fifteen minutes, and returned a verdict for my neighbor, equivalent to saying the hog pen was all right, but my family was too fastidious.

In this case, if the wind had blown one quarter of the time from the hog pen on each of these other neighbors instead of nearly all the time on me, and my daughter had entertained each of these young men in turn, and given neither of them special encouragement, all of these witnesses would have supported my accusation, and the hog pen would have been abolished.

You see, therefore, it is not so much what actually exists that constitutes a legal nuisance as what can be proven by competent witnesses. Nevertheless, it is not often a nuisance that is a serious danger to health exists that can not be legally proven and abated.

So far as health officers are concerned, it is best when a nuisance is complained of to examine it in person, and if found to be a legal nuisance, make an accurate description of it, both as to location and character, take the names of several (not less than two) competent witnesses—the more reputable the citizen the better as a witness—and with this memorandum go to the offender and lay the matter before him in a clear and dispassionate way, stating the facts as you are prepared to prove them, and when he blusters keep your temper, and in a firm but friendly manner tell him if he does not take immediate steps to abate the nuisance you will have to prosecute him, which will be both annoying and expensive. If the offender is a well balanced citizen he will proceed at once in good temper to abate the nuisance, and if he is somewhat cranky about his personal rights and privileges he will sleep off his sulks, and attend to the matter next day to avoid prosecution. At least, in my somewhat lengthened experience with nuisances, numerous and nasty, I have succeeded in having them all abated without a single prosecution.

INSPECTION OF POOR ASYLUMS.

It is a part of the official duty of the County Commissioners to examine into the condition and management of the county infirmaries and so far as personal inspection of the premises is concerned it is usually done by the Board as a body on a day appointed in advance and the institution is found in its best estate, the surroundings are in good order and the dinner prepared by the Superintendent for the occasion is a most enjoyable meal. But such formal visits after notice do not afford the opportunity to obtain a full and exact knowledge of the sanitary condition of the building and its environment, nor of the character of the food, its preparation and serving. Indeed the visit of the Commissioners is for a more comprehensive purpose, being the general management and economy of the institution, and for such purpose their method is probably best.

But the Sanitary Inspector has a different mission and he should visit the infirmary without notice, timing his arrival to be present at the call of the inmates to dinner, or some other meal, and witness the manner and style of the call, the order of the assembling of the inmates, how they behave at the table, the quality and quantity of the food, how it has been cooked and how it is served at the table. Then see how the crippled and infirm, who can not leave their rooms, are fed and waited on. Inspect the lodging rooms, work rooms and store rooms, the

quarters of the insane, epileptics, idiots and imbeciles. Examine the facilities for taking care of the sick, and close the service with a sharp inquiry into the condition of the cellars, outhouses, general surroundings and water supply. A visit thus timed and conducted in the proper spirit will fill the Inspector with information that will enable him to make a true report of the sanitary condition of the county poor houses and its occupants.

SUICIDE IN INDIANA.

THE EXTENT OF ITS PREVALENCE AND HOW IT MAY BE CHECKED.

The following is a paper read last week at the annual meeting of the Missouri State Homœopathic Medical Society at the Lindell Hotel, St. Louis, by Dr. W. B. Clarke, of this city, and is published here because it is of too great material interest to the citizens of this State to be exclusively hidden away in a purely medical journal:

Filled is life's goblet to the brim;
And though my eyes with tears are dim,
I see its sparkling bubbles swim,
And chant a melancholy hymn
With solemn voice and slow.—*Longfellow.*

A wave of suicidal mania has been sweeping over the United States with great violence for several years, but in what portion of the country its destructive effects are most pronounced would be a difficult question to decide. Three years ago the thought came to me that Indiana's capital was having more than the usual proportions of suicides, as compared with cities of like population, and so, for my own information, I arranged on paper a tabulated form showing the statistics regarding each case of suicide attempted in Indianapolis during the year ending May 1, 1890, the list being made up from clippings from the newspapers of the city, and comprising 87 attempts (31 being successful, poison being used in 64 cases), but its report will not be attempted here. On scrutiny of the annual reports of the State Board of Health, in the light of the investigation above alluded to, I became convinced that the State's suicide statistics were woefully meager and incomplete, and decided to verify that belief by keeping a State list of suicidal attempts for a year in the same manner, this year ending with October, 1891, the Board of Health year, the list comprising 427 attempts.

A COMPLETE REPORT IMPOSSIBLE.

Of course no claim can be made that the report is anywhere near complete; indeed, the exact opposite must be claimed, and for the following reasons: (1) My clippings were made from the Indianapolis papers, and it is quite reasonable to assume that many cases reported in remote parts of the State failed to be noticed by the exchange editors or the telegraph; (2) as I was out of the State several times for a few days at a time during the year, it is likely that some published cases missed my notice; (3) my list embraces only cases published as suicides, and

takes no account of sudden deaths, found deads or mysterious disappearances, some of which were probably suicidal in character; (4) there are four insane asylums and two penitentiaries in the State, and it is not the official fashion to loudly herald suicide news emanating from such institutions—and perhaps no cognizance should be taken of intra-asylum, penitentiary or jail cases in such a report as this anyway; (5) every physician will probably agree with me that at least one-third of the actual attempts at suicide are never described in the newspapers, because of the family desire to smother such news, often with the energetic assistance of the family physician.

I have the authoritative newspaper clipping regarding each one of these 427 cases, each month in an envelope by itself, and, as can well be imagined, many a gruesome tale is there locked up—a vein of richness fit to be worked by novelist, humanitarian, philosopher, statistician, alienist, or any student of the matter in hand. Many a tale of woe is there told in addition to the cases themselves, as quite a number of the cases of suicide were preceded by a gasty tragedy.

This list was condensed for a newspaper's use by giving each case a paragraph, stating name, age, occupation, residence, date, and means used, the various totals being as follows:

Statistics of Indiana suicides for the year ending with October, 1891:

Attempts	427
Successes.	283
Failures.	144
Males.	311
Females.	116
Successes, males	231
Successes, females	52
Failures, males.	80
Failures, females.	64

The means used in these 427 attempts are shown as follows:

Shooting.	84
Morphine.	61
Laudanum	18
Hanging	53
Not stated	38
Drowning	37
Cutting throat.	25
Stepping before train.	17
Rough on rats	13
Poison	18
Strychnine	11
Arsenic.	7
Paris green	6
Chloroform	5

and four each by jumping from window and chloral, three each by carbolic acid, belladonna, and cremation, two each by butting a wall, cutting wrist, and stabbing breast, and one each by jumping from cars, corrosive sublimate, camphor, turning on gas, chloroform and carbolic acid mixture, cantharides, oil of tansy, starvation, cyanide of potassium, eating match-heads, and chloroform and morphine mixture.

A FEW POINTS ANALYZED.

Poison was used 157 times, including the thirteen by "rough on rats," an article that ought to be interdicted by law, because of the numerous dangers and temptations of having it around, it not subserving any good purpose that other harmless and equally rat-effective preparations will not. To this poison number (157) must be added some from the "not stated 38" column. The fatal results, too, probably number considerably more than the 283 reported, for the reason that among the actual fatalities are included only those so reported, though the expression "can not live" occasionally occurred in the newspaper reports.

The foregoing statistics were reported by me in a paper read before the Southern Homœopathic Medical Association, at Nashville, Tenn., last November, the paper containing a partial resume of the symtumatology of a few of the leading remedies homœopathic to the condition usually called a mind diseased, especially where the suicidal tendency is present (though, of course, all suicides are by no means insane), and closed with the recommendation that some brother in each State in the Union should take upon himself a labor for the year 1892 similar to the one just described, so that with the information thus obtained a report could be made up of the extent to which the frightful and abnormal development this "malady of cultivation" has really reached in this country.

As the preceding report did not embrace the last two months of 1891, I thought best to complete the year, and have recorded sixty-two attempts in those two months, three more than in the same months in the report, thus showing that the actual total of 1891 was just 430. As the latter figures do not otherwise materially vary from the original report, they do not need dissection here.

NO WORSE THAN IN OTHER STATES.

Now, the first thought which might strike an outsider in regard to this ghastly report would probably be that Indiana is a very "unhealthy" place to live in, if not, indeed, a very "desirable" place to die in. But I very much doubt if this showing is worse, in proportion to population, than would be shown in other States if the test were made. The bounty of nature in our State last year was something phenomenal, and the conditions otherwise (if we except the grippe epidemic) were unusually favorable to longevity.

The newspaper reports were, of course, meager as to causes, occupations and many points of interest, nor have we much time for their consideration just now. In the professions ministers and doctors were each reported victims six times, and the lawyers three or four times. As far as occupations were reported, the farmers were far in the lead, because Indiana is an agricultural State, and because her farmers have an almost insatiable craving for change. There were thirty-nine farmers, two of their wives, five of their sons, four of their daughters, and one farm-hand. So it is safer to be a hired hand in the country than an owner. The favorite "route" (as the reporters say) among farmers is hanging, probably because it is the "cleanest" and most convenient way in the country, at a distance from the poison shops. The youngest suicide was a boy of twelve, and the oldest a man of ninety-two. There were half a dozen Afro-Americans in the list, showing that suicide, which a few years ago was very rare or almost unknown among the negroes, is now increasing among them.

WHAT ARE THE CAUSES.

I will not here endeavor to trace effect to cause (except in one particular), nor try to fully indicate where we shall look for relief in an endeavor to minimize the baleful influence of this Moloch stalking in our midst, this imitative-craze death producer which is causing so much of grief, disturbance and demoralization. The single reference to the causation of suicide I wish to make here brings up the question of indiscriminate and heavy self-dosing among the people, a practice all too prevalent in the West, and one that has grown wooly with age. This point was alluded to in the paper, "The Brain Dangers of Quinine," read by me before this Society two years ago, published in the *Homœopathist*, for April and May, 1891, as follows:

"I feel confident that a frequent cause of suicide has been generally, if not entirely, overlooked, and so am impelled to utter a word of warning regarding it, viz., the reckless use of quinine, especially its use unauthorized by a physician. Any one who knows the pathogenetic ability of quinine, or rather its ability to cause symptoms or perturbations in the well or nearly well person, especially brain and nerve symptoms, can not deny that it possesses the power to produce a condition nearly allied to insanity, if, indeed, it practically falls at all short of insanity. In large doses it is a depressant, instead of a stimulant, contrary to the popular belief, and it is the most popular and universal every-day amateur remedy. Everybody seems to take it, and for any and every ailment. For want of space I can not further elaborate this point (as it rightly calls for a sanitary article of its own), but it is reasonably easy of proof that many insanities, suicides and murders can be traced directly to the ill-advised and inordinate use of quinine."

THE PREVENTION OF SUICIDE.

Now, as to the means of the prevention of suicide: One which might prove useful, but which is not directly adopted in this country, touches the finances of the suicide or his family, as I shall show later on. One who has noticed the peculiar way in which certain crimes, occurrences, suicides, and even accidents roll over this country in rythmical waves can not help but feel that the newspapers would really do better work by limiting each report of a suicide to a simple announcement paragraph instead of spreading all the harrowing details before the impressionable quivering-on-the-verge perturbed spirits who read and straightway go and do likewise. A good editor is known quite as much by what he leaves out as by what he puts in, and in the interest of the public good I certainly believe that the experiment above outlined is worth trying. New York arrests and punishes those who fail in securing death after attempting suicide, thus offering a premium on thoroughness. A report of the usefulness of this repressive measure would be interesting if there were figures to compare it with. A floating item reports that during 1891 there were 192 arrests in New York City on the charge of attempted suicide.

Repressive measures have been useful in the past in other countries, but such are too severe for this enlightened age, as, for instance, nailing to the cross, as the Romans did, dragging the naked body through the streets, as the French did, and burying at the cross-roads with a stake driven through the body, as the English did. England still confiscates all property found on the body of a suicide, and the Catholic Church the world over refuses that body burial in consecrated ground. I believe it would be a wise move, as a repressive measure, to have a searching coronial inquiry in every suicide case, all the expense of which should be borne by the estate of the deceased or by his nearest relatives, the

final disposition of the remains to be at the expense of relatives, and failing in this the body should be turned over to medical students for dissection, or surgeons for experimentation, just like that of any other pauper or hospital-stranded wreck.

PLEA FOR MORE STUDY OF THE SUBJECT.

Some States, notably Indiana, have no pharmacy laws, and possibly suicide is easier in such States than in others, so I have suggested the passage of such laws as worth consideration if only for the reason of their possible good effect in checking this evil. I believe that there is a natural shrinking among women from the more startling and public forms of suicide, which will deter many from committing, or rather attempting, the act if poison can not be obtained. For want of time we can not now consider many interesting points running through this study, but one idea that has profoundly impressed me is that we have in this matter of suicide a most important question to deal with. We think we are familiar with it as we glance at the papers day by day, but I believe that but few realize to what actual proportions the widespread evil has attained. It pervades all ranks, and, if we may believe the reports, no one is really safe, much as he may fancy he is, for, as Ophelia said, "Lord, we know what we are, but know not what we may be." Even the courts have legalized suicide, as several life insurance companies have found out to their cost. Our great master Hahnemann said, "Where we have to do with an art whose end is the saving human life, any neglect to make ourselves masters of it becomes a crime." So is it not the duty of the medical profession to put a little more general study into this important question, in the hope that good will result? Who will evolve the plan that will minimize the evil?

Whether man, who has no voice in the matter of entering this world—

"Fashioned and shaped by no will of his own;
And helplessly into life's mystery thrown;
Born by the law that compels men to be
Born to conditions he could not foresee"—

Has the legal and moral right to determine when he shall quit living in it is a question which anthropologists have disputed over for ages, but I must take the ground, and steadfastly maintain it, that he has not that right. By taking this ground we will thus show forth a reason for the faith that is within us—that faith being that there is some way to decrease the appalling number of felodesses that now disgrace our fair and peaceful land.

PRIVY VAULT NUISANCE.

BY G. W. BURKE, M. D., SECRETARY BOARD OF HEALTH, HENRY COUNTY.

To Secretary State Board of Health:

In reply to your request, I submit the following, without any practical or theoretical argument to any extent, and nothing extraordinarily new, but it may act as a reminder to those who read it, to discharge their official duty in preventing disease, and especially the condemnation of privy vault nuisance, which are the deadly enemy of mankind. They are the sources from which the most destructive diseases to the human family arise, and to which mankind in general pay the least attention.

I notice in the reports of the State Board of Health for the years 1887, 1888, 1889, 1890 and 1891 twenty-one thousand seven hundred and seventy deaths from zymotic diseases, and of that number the privy and its vaults constituted four thousand four hundred and fifty-two, nearly one-fifth of the deaths. Is not that appalling, when such facts are presented, in regard to the mortality of the State? And we may add another dangerous zymotic disease, that of diphtheria, which was the cause of two thousand three hundred and fifty-two deaths in the same period. Is it not nearly from the same source as typhoid fever? The privy vault diseases, arising from the above source, are far more dangerous than the cholera of Asia, or the yellow fever of Louisiana, which are classed as filth diseases, only requiring heat and moisture at certain seasons of the year to develop either in its most malignant form, and only arrested by the frosts of autumn. A warning signal is given in the homes of these diseases, before they start on their errand of destruction from city to city, along the most frequented lines of travel and the channels of commerce, from continent to continent, at the expense of thousands of lives and millions of treasure, by spreading forth their dark wings, hovering over the country of their origin before leaving it, on the wings of the wind, to find lodgment in as equally fertile soil, for its increased growth and development, as it has in its nativity. But it is not so with the disease of the privy vault; they give no warning to put the house in order; insidious as they are, they gradually and persistently work into the organization of man, upon every occasion until his physical organization gives way to further activity. They are at work in all seasons of the year; the inhabitants of cities, towns, villages and rural houses, are constantly menaced by these diseases of the privy vault and water closets. And to encourage their reign, these vaults or receptacles for the excrement are situated, generally, within easy reach of the dwelling and of convenient approach, more so than for comfort, as you generally find them at the back end of the lot, near a pig pen, constructed many times of old boards, with cracks large enough to have the cold winds of winter whistling through; and so foul, stinking, swarming with flies and hot in the summer that the hogs squeal to get away from them.

The vaults are frequently used for other purposes—all filth, dead animals, cats, dogs and everything else, which is not the most pleasing to the eye or nose, are there deposited, to increase the virulency of the poison already being generated to enter the system of the near inhabitants from the water supply. It is quite difficult to understand why people of ordinary intelligence will be so careless and indifferent about their health and comfort in respect to water closets and privies. Indeed, if the privy is situated so that the natural drainage is in the direction of the spring or well, thirty to fifty feet away, it makes no particular difference. This matter of privy vaults and water closets claims the attention of the health officers of the State, county and corporations of the State more than any other subject that requires their attention. They should enforce common decency with those who are devoid of it. The privy is cared for less than any other department of the premises occupied as a home, while it causes more disagreeable odors to the household and neighborhood than anything else alone, not considering the lives that are lost and jeopardized, and the sickness and suffering they entail by the soakage from them through the soil to the water supply, in the neighboring wells, from which the water is used for drinking and cooking purposes. Why, such water is not fit to bathe in, let alone to wash fruit and vegetables for cooking and for food. The towns and villages of this great State are filled with these murderous instruments, situated but a short distance from the wells on almost every lot from ten to

thirty feet deep, attracting this poison to them through the soil or from the surface as readily as the farmer expects to drain his land by the tile two feet in the ground to drain fifteen feet on each side of the line of his tile, upon the theory that if a tile drain two feet in the ground it will drain thirty feet of land, a well twenty-five feet deep would drain 375 feet, or from a privy $187\frac{1}{2}$ feet distant.

Rarely do we find a privy vault that distance from the water supply in the towns, villages and farm homes in the State—seldom one hundred feet distant from the well, and that poorly protected from the surface drainage. The surroundings of dwellings, whether in towns or the gossiping village or rural home, do not receive the attention that is required at the hands of the occupants in many instances, more especially if it be a tenant. Whether they be landlord or tenant there are those who neglect the most simple rules of sanitation and hygiene. They think that they have plenty of room, plenty of air, not encroached upon from any direction and will not be dictated to by any person or by any one of authority in regard to their premises.

While the debris of all kinds is strewn in all directions, the refuse from the dwellings, the stables and pens, remains as deposited, foul pools of water here and there evaporating and poisoning the atmosphere that you breathe. Such individuals are extremely careless of their own bodily welfare, their families and that of their neighbors. When approached upon the matter he says that this is a free country and that I will do as I please. Just so long, sir, as you do not interfere with the health and liberty of those in your neighborhood.

Each individual is exposed directly or indirectly to other person's filth in all ranks of life and the safety of each individual is bound up with the safety of others, so that each person has an interest in the general health and in the general and special measures for the safety of public and private health, and each individual must be held to a strict account for jeopardizing the life and health of others by his neglect of hygiene and sanitary laws.

You may give some attention to the sanitary condition of your own dwelling and its immediate surroundings, but neglect the stables and pens where your horses, cattle, sheep, hogs and fowls are secured and fed, but it is equally your duty and of as much importance for your health and that of the public that their quarters are in as good sanitary condition as your own dwelling. Their growth, development and health depends upon it. If the stables are foul and filthy, slush pools and stagnant drains are in and about them, the animal becomes contaminated by the air it breathes, the food that it eats, and the water it drinks. They can not thrive and make healthy food. The milk, butter and cheese would be contaminated by a dangerous and poisonous germ used from animals so situated, or the utensils in which they are made, the germ may find lodgment even from the water in which they are supposed to be cleansed, and the supply but a short distance away, already poisoned from the filth of stables and pens. Vegetables may bear the poison from the soil in which they have been grown if the soil had been spread from cesspools and privies of your premises while they are in such a condition. The home may be visited by disease at any time and prevail as an epidemic under such circumstances in your family. It springs up suddenly in a violent form in the settlement, claiming one and two lives from each family which were but a few days before a prosperous and happy community. All this distress caused by the products from this farm or home, by the neglect of one individual to observe the ordinary rules of hygiene and sanitation. The water supply to any dwelling is of the greatest importance for health and to prevent disease, for if the fountain be impure the stream will be foul. It is said that the leprous father not

only begets a leprous son, but he jeopardizes his neighbors with the foul contagion of a loathsome disease. So he who drinks from a foul stream, and permits his neighbors to do likewise, commits a crime and should be punished. The ordinary open wells that are used as the water supply in villages and farms are supplied partly by springs and partly by the surface drainage. It usually contains the alkalies and salts of the nature of the soil. In the proximity of dwellings the salts may be increased by the drainage of the house refuse, or stables and privy vaults, which leads to the contamination of the water with the products of decomposed animal matter. From the nearness of wells to cesspools and privy vaults the water becomes impure from matters which, while they hardly affect the taste or smell of the water, have, nevertheless, the power to create the most deadly action in the person who uses it. In the neighborhood of graveyards the water of springs and wells is often impregnated with animal matter from recently filled graves. Over three-fourths of a century ago France decreed that no one should dig a well within one hundred meters of any graveyard. A law of the same character should be enforced in this State.

The products from the decomposition of animal matter in water is by far the greatest impurity that any water can contain, and such water taken into the system, even when it contains but a small quantity of decomposed animal matter is very dangerous to life and health by those who use it. This poison can not be detected by smell or taste and in fact the flavor is palatable to many persons. Many of the most fatal endemic or epidemic character are traced to the use of water poisoned with the soakings from soils charged with sewerage and excremental matters from privy vaults. These sudden outbreaks of disease, which occur so frequently, all arise from polluted and poisoned water by the products of decomposed animal matter, and when the source of water supply is changed the disease subsides as quietly as it came, after claiming a score or more of lives for its victims and the loss of thousands of dollars. The specific contamination of the ground water, and thereby of the supply for household use, is the more common and wider spread source of certain of our most dangerous diseases, the example of which best known is typhoid fever. Every privy vault, every cesspool, is a source of pollution. Many cases of disease and epidemics have been traced directly to the use of water containing sewage, that had passed a greater or less distance through the soil. All disease arising from filth will destroy life is an indisputable fact, and they can be prevented and lives saved by cleanliness and Godliness. But when the raging storm is upon us, it is too late to attend to the privy vaults, foul pools and stagnant ditches. In the smaller towns and villages, and in the country, if attention was paid to the prevention of the accumulation of excrementation matter, and the fouling of springs and wells, careful draining and ditching, with the pure air that they would breathe, the healthy food that they would eat, and the uncontaminated, sparkling water they would drink, sickness would be unknown to them except from atmospheric changes. Banish from every home in the State the privy vaults, if it is within the power of the State Board of Health; if not, a law should be enacted for the purpose, with a rigid enforcement so that not a semblance of them shall remain, as they have for centuries without any changes or improvements whatever, except in the cities and larger towns of our country, and your names will go down in the history of the State as its greatest benefactors. They are a nuisance and are so recognized by persons with ordinary intelligence, and abominable in a civilized community.

As the State Board of Health you are responsible for the public health, and the preservation of the lives of the people from all preventable causes of disease

and death. The means should be placed at your disposal by the State Legislature to accomplish it, and not until then will the people of the State grow in health and prosperity, with the saving of from fifteen hundred to twenty-five hundred lives yearly.

DRUG INTEMPERANCE.

W. F. CURBYER, M. D., THORNTOWN, INDIANA.

The present high state of development which man enjoys among the civilized nations of the world was attained only by persevering effort and many sad experiences; and by constant care and better living life is growing longer and better each year. While we say human longevity is becoming greater, our national integrity is being made stronger and our people better, there are influences and habits among us which tend to retard our development and growth, as a people. It is against those agencies that produce this weakness and untimely death that sanitary science wages her warfare.

The practice of medicine deals with the individual and his ailments, while sanitary science cares less for the individual than for the race; sanitary science is interested in the welfare, the mental, moral and physical growth of the human family, its civilization, its physical integrity and its general prosperity. Sanitary science teaches right living, and good surroundings the means of growing healthy and strong, which once attained is the nation's true source of power and vitality. Sanitary science is deeply concerned in the habits of individuals because they are to be the parents of the generations to come.

Habit is a cruel master, and when once established becomes the ruling monarch. The habit of using narcotics and stimulating drugs is the great cause of physical degeneracy among our people. With the death dealing habit of drunkenness, the curse of nations, the destroyer of fortune, body and soul, we will not deal, but leave it to those who have for years pushed the cause forward from pen, pulpit and platform, nor will we at this time discuss the evil effects of tobacco upon the human system, its filthiness and poisonous effects upon the nervous system, the circulatory and digestive systems, its disgusting and demoralizing effects upon our neighbors as well as ourselves, all of these you well know or can readily learn should you desire. But public attention should be especially called to the *drug habit*. The daily use of narcotic medicine to calm nervousness, to urge the tired or devitalized nervous system to continued work, to goad the weary or exhausted body on habitually is dangerous and often destructive.

The use of opium, chloral, ether, chloroform, bromides, arsenic or alcohol by continued use grow with the individual until a habit is formed, sooner, perhaps, than many imagine. Few realize their condition until their craving demands the drug.

To show the growth on the system of these habit-producing drugs, we will say that only a few years ago the bromides were used in very small quantities. Now over two hundred tons are used annually in this country. Hydrate of chloral was only introduced to the profession in 1869. Now statistics show that in England and America alone more than four hundred tons are used each year.

To speak of the amount of anodyne mixtures prepared from opium, digestive ferments, alkalies, alcoholic bitters, iodides, bromides, chloral preparations, etc., that flow at full tides down the throats of a habit-ridden people is appalling. Walk into a modern drug store and you will see flaming pictures and advertisements displayed along the walls, setting forth the marvelous powers and curative virtues of the proprietary medicines that load its shelves and cases.

You can then perhaps draw some idea of the vast amount of money invested in this nostrum traffic. You perhaps might ask the question, "Why is it man in the present age finds it necessary to consume such large quantities of narcotic drugs?" Our forefathers were stronger and healthier than we, and these narcotics and patent medicines were unknown, the walking and wasted form of the drug tippler was not seen so frequently upon the streets, and we might add that the coffers of the patent medicine men were not enriched by millions every year.

We would not for a moment intimate that medicine has not a legitimate sphere, and that it does not fill an important place in our economy. It is not to the proper use of a drug that we object, but to the abuse and the unnecessary use of a remedy.

It has been said of Americans that we are "poor liver-diseased wretches and a drug-guzzling nation." This is not from climate, diet or water, but from habit. Almost from the first drawn breath of the infant, should he exercise his lungs and voice beyond æsthetic bounds, some quieting potion, like Mrs. Winslow's Soothing Syrup, Godfrey's Cordial, paregoric, etc., or other death-dealing drug, must go down the little, innocent throat until the delicate nervous system is benumbed beyond resistance, the seeds of disease planted that will make the future existence and growth of the child precarious. The drugging of children habitually is a matter of the most serious import and worthy of the most careful consideration, and should only be resorted to by competent medical advice.

The multitude of medical colleges, free dispensaries, medical literature, advertising, etc., is inclined to educate the public to expect their medicine as much as they do their daily bread. There may be some proprietary remedies on the market of real worth, but so much of it is cheap, vile and worthless, and only benefits the maker by his ingenious and persistent advertising. The American is in a hurry; he has no time even for eating; he gulps, bolts and washes down his meals. Everything is done on the gallop; every known law of right or physiological living is violated, and he becomes a dyspeptic. The druggist is called upon; he recommends pepsins, pancreatine and other digestives. These articles are merchandise to him, and he has them for sale, hence he urges them upon the sufferer. These may give temporary relief, but nature never grows strong by being put wholly at rest. The effect in time is to induce gastric inertia, the peptic glands lose their stimulus and they become dormant, hence more artificial assistance is demanded.

Let any organ lie dormant or be put wholly at rest and it becomes weak and inactive.

When we ceased to use our teeth for chewing roots, raw meat, nuts and grains and resorted to thorough cooking, we began to loose our teeth, and when we had our foods digested with the secretions of the pigs stomach, we lost our stomachs also.

The infant is fed upon artificial food because the mother's health is poor or it is not convenient, then they are drugged for the colic, diarrhoea, worms, teething, etc., really is it any wonder that one-fourth of all the children born in civilization die before they are five years of age. These weakened and impoverished bodies

may gradually grow to adult life and then transmit to their children their constitutional weakness.

It is a recognized fact among medical men that one of the most potent causes of diminished vitality in the young is the inherited weakness caused by the habits of the parents in using such narcotics as alcohol, opium, tobacco, chloral, etc.

Only yesterday while in attendance upon an obstetric case, my attention was called to a small boy who was expectorating freely upon the hearth, when asked if he used tobacco, his mother replied in the affirmative, and said his father and grandfather taught him at the age of three years and now he was five. I gave his heart a careful examination and found marked irregularity and evidence of valvular insufficiency, no doubt the lesion was induced by the tobacco poison.

Medicine has a dual action, it is capable of doing good or evil, it may not cease with the individual, but go down through the race. Intemperance in all its forms may become a heritage, may be the cause of great suffering and an early death.

We would urge upon all sanitary Boards the importance of teaching the public the dangers of indiscriminate and habitual drugging of children; we would also advise the State Board of Health to ask the legislative body of our State to enact a law whereby nostrums of all kinds offered for sale within the State should be required to have the formula placed upon every package and the State chemist to make certificate that the contents are in accord with the formula, with a penalty for each violation of the same, thus fully advising the public in regard to the dangerous nature of many of the proprietary remedies now advertised as harmless.

The Board of Health should also urge the law-makers to enact a law that would make the selling or giving of tobacco in all its forms to all persons under the age of fifteen years a misdemeanor and subject the violator to heavy fine and damage.

THE HYGIENIC IMPORTANCE OF PURE WATER.

BY G. D. BRANNON, M. D., CROWN POINT, IND.

The hygienic necessity of pure water can be considered briefly as follows: Water is the most abundant element in nature. It has the power of holding in solution substances which would prove deleterious to the animal economy if introduced into the digestive tract. As water is universally used as a beverage and as a medium in preparing food, its purity is an important subject to all. We find in water vegetable matter, decomposed, decomposing or ready to be decomposed. Sewage and animal matter, by means of carbon dioxide, the carbonates of calcium, lead and potassium are introduced into water. In examining water we first ascertain its source; if from a well, we examine the ground around it; is it made ground or natural; if made, does the ground contain substances which may find their way into and pollute the well; if natural, does the surface of the ground or sub-strata slope towards the well, so as to convey impure matter from a distance? The position of the well relative to privy vaults, pig pens, cow yards, stables, etc., rule that a well will drain a surface the radii of which equals twice the depth of the well will not hold good in all cases. In a country which has been inhabited

for a long period of time the ground becomes saturated with the impurities which by percolation find their way a long distance into an open well. The source from which cities and large towns are supplied with water is either a large river, a lake, an artificial reservoir or artesian well, all of which may be contaminated by sewage matter. Not only do we find substances of a deleterious nature, and which will cause disease *per se*, but the germs known to produce certain diseases, as Asiatic cholera, typhoid fever, erysipelas and diphtheria. Tests for impurities: The following simple tests for impurities in drinking water will suffice: if a quantity (F3iii) of water is evaporated carefully to dryness in a clean porcelain or glass vessel, and then heated gently, the blackening of the residue will indicate the presence of the more stable organic compounds, which will disappear by further application of heat with access of air. If during the latter operation there is any deflagration or rapid combustion, it indicates the presence of nitrates in the water. A very rough approximate of the amount of this organic matter can be made by weighing when dry, and again after it has been burned off. There are very few waters so free from organic matter as not to leave a blackened residue, while at the same time it would be impossible to have water rich in organic material which would leave little or no char. This test, then, is of use when the amount left is greatly in excess of the char from comparatively pure water. Allow another portion to stand in a warm place exposed to the light for several days. Should it become putrid or show the presence of animal or vegetable growths, either to the naked eye or by the aid of the microscope, there should be grave doubts as to the fitness of the water for domestic purposes. To test for sewage matter: In water contaminated by sewage there is a large increase of alkaline salts, notably common salt, sodium chloride, the chlorine of which can be readily detected after rendering it strongly acid with pure nitric acid, by a solution of silver nitrate, a white curdy precipitate being formed. Since this salt is normal in small quantities in most waters, the resulting precipitate should be quite decided to indicate any sewage matter. The best and cheapest way for disinfecting impure water is to boil thoroughly, then expose to the air for a time to absorb again a portion of oxygen and carbonic acid. One two-thousandths of salicylic acid will keep river and pond water in casks perfectly fresh and without unpleasant taste for weeks.

It is asserted that, at times, organic matter is contained in water in such a condition as not to respond to the ordinary reagents until after it has undergone some decomposition. Consequently, in a suspected water, if no reactions can be obtained in the fresh water, it would be advisable to let a portion stand as above and then test. A simple plan for testing for organic impurities is by making a solution of chemically pure permanganate of potassium—gr. viii to the 3i of distilled water. Into a half pint of the impure or suspected water in a goblet or tumbler put one drop of the red solution; if the red tint disappears from the glassful in half an hour, add more of the solution. For every drop that loses its color in the half pint there will be found from one and a half to two grains of putrid organic matter in the gallon of water. Nessler's test for ammonia by using a solution of iodide of potassium gr. xxxv in 3iii 3vi of distilled water, to which add a cold concentrated solution of mercuric chloride until the mercuric iodide first forms; then dissolves by agitation in the solution and at length produces a very small permanent precipitate; 100 gr. of caustic potassa are next dissolved in 3vi 3ii of distilled water; mix the solutions and add distilled water to make 3xv 3v. This, added to water containing 3 gr. of ammonia to the gallon, will give a yellow color; a larger amount of ammonia a brownish yellow color.

[From volume just out, Transactions of American Public Health Association.]

SULPHURING OR BLEACHING DRIED FRUIT A MISTAKE, IF NOT A CRIME.

BY JOEL W. SMITH, M. D., CHARLES CITY, IOWA.

The subject of this paper should command the careful attention of consumers of dried fruit, of conscientious fruit dealers, and of all health authorities. Fruit is now regarded more as a necessity than as a luxury, the want of it being a common cause of ill health.

As fresh fruit is not always obtainable, various methods for preserving it are in use, drying being one of the oldest and best for many fruits. Middle-aged people recollect when sun or air drying was the only method for market. Then some good housewife discovered that more rapid drying by artificial heat, with or without the addition of sugar, was a cleaner method, safer against fermentation and decay, retained the flavor better, and the fruit was also lighter colored, than when sun or air dried. The present evaporators are only an enlargement of the idea of such more rapid drying, while canning consists in the exclusion of the microörganic germs of fermentation.

This is an age of progress, yet experience often shows that not all changes are improvements. It is about fifteen years since the sulphuring or bleaching of dried fruit began. At first only the uniform light color was sought, as in apples, pears, etc., but for some years past nearly all the large evaporating establishments have "sulphured" all kinds of fruits and some vegetables, and now much of the California sun-dried fruit for market is also treated in the same manner. The light color, especially of apples, early attracted unthinking consumers and commercial men, thus materially increasing the price of such fruit. That caused the practice to spread even to those who disapproved of it. The expense and trouble were very slight. Fruit so treated is said to dry more readily, consequently all now prefer to do it.

While the apparent change is only in color, there is a loss of the natural fruit flavor, even by the most careful sulphuring. Unfortunately, some people do not notice the difference, but careful comparison shows it, as is admitted by the manufacturers of such fruit.

The practice began in California with apricots, as early as 1879. At the Twelfth State Fruit Growers' Convention, held in Fresno during four days in November, 1889, a paper on "Fruit Drying" was read by J. L. Mosher, of San José, and in his paper he remarked, "If fruit be picked before ripe, and over-sulphured to produce whiteness, it is devoid of its true rich taste and flavor, and *only requires polishing to make buttons.*" (The italics are his.) In discussing the paper, one gentleman said, "I believe sulphuring the fruit is the greatest mistake in the world. I do it, but I believe it is wrong. The flavor of the fruit is gone after it is sulphured."

This change in quality was the first thing that called the attention of the writer's family to what was lacking in the "nice, uniformly colored" bleached fruits.

Later investigations have proved the presence of sulphate of zinc, "white vitriol," in all samples of fruit where zinc-surfaced trays were used to hold the sulphured fruit while drying. Interested parties have charged the German prohibition of American evaporated apples to rival trade opposition, but there is no

German fruit to compete with them. The real cause was the finding of zinc poison in considerable quantity. A good paternal government aims to protect its people.

WHY SULPHUR FRUIT AT ALL?

The advocates of sulphuring fruit say, (1) It dries quicker, (2) looks better, (3) keeps better, and (4) sells better. Besides, it makes ripe, unripe, and poor fruit all look alike; and if not so good for it, but few know it.

Sulphurous acid is formed by burning sulphur, and is readily absorbed by water. It abstracts oxygen from many vegetable substances, and thereby bleaches them. It also tends to prevent microscopic organizations that cause fermentation. The acid in liquid form is colorless, very cheap, and smells like burning sulphur; is antiseptic, a preservative fluid for some substances—sample fruits, etc. Sulphur is often burned to disinfect sickrooms of disease germs, and to kill rats, mice, and vermine, but its use with food is objectionable. Ants and other insects, it is said, will not touch sulphured fruit, while they readily attack well ripened fruit that is not sulphured. The instinct of insects and animals is sometimes better than the practice of human beings. In general, substances that repel such creatures are hardly safe for human food.

THE EFFECT ON CONSUMPTION

Has seemed to be a decided falling off in demand among the more intelligent class of people. Retail grocers know that many who once used dried fruit extensively say, "Somehow we have lost our relish for it," and have almost ceased to use it since the craze for sulphuring fruits began. Fruit men say, "The public demands sulphured fruit, will pay more for it, and we will supply it." The public will yet show them that it can get its eyes open. As the green and canned fruit interests are the only permanent gainers by the sulphuring process, they are interested to have it continued.

DIFFICULT TO OBTAIN.

It is not easy to obtain a superior quality of unbleached fruit. In 1889 several retail grocers who understood the question corresponded with parties evaporating apples. The reply was, that "if an order for not less than twenty barrels was received at one time, apples would be furnished unbleached, otherwise not."

SULPHURING NOT DESIRABLE.

The slightly yellowish-brown color of unbleached dried fruit is an evidence of ripeness, good quality, and proper drying. The more rapid the drying the lighter will be the color, and the fruit will keep well if at once properly excluded from the air. When sulphured, the good, the poor, and the unripe all look alike. Not so with the unbleached. No poor nor unripe fruit can make good dried fruit. The gain of sulphuring is always with the dealer, and not with the consumer.

HEALTH AGAINST LOOKS.

In preferring looks to quality, the people are often at fault. Public enlightenment will correct most dietetic errors. Good health is now sought by many, and will be by more in the near future, through correct living rather than by the swallowing of drugs. And in that more excellent way, "in the good time coming," there will be no demand for sulphured and other drugged fruit among intelligent people.

DANGERS.

There is danger from fruit in metal cans, as is well known, and fresh fruit is frequently unobtainable, while both are often more expensive than dried fruits. Good unsophisticated dried fruits are always harmless. If green fruits are at times unobtainable, canned fruits dangerous, and a popular craze has rendered dried fruits also dangerous, what can the suffering public do? It is between the alternatives of using no fruit, or that which is injured or poisonous. Is the sulphuring of fruit a mistake or a crime?

TO CORRECT THE ERROR,

Enlighten the people and prohibit injurious practices. Legal suasion only will stop it at present. The common schools in many States are required to teach the effects of alcohol and narcotics. Why not also include the effects of different foods?

HOUSE TO HOUSE INSPECTION—HOW ACCOMPLISHED AND HOW OFTEN REPEATED.

BY G. W. BURKE, M. D., NEW CASTLE.

The question is of the greatest importance, and as such, claims the attention of health officers in general more than any other upon which they have to decide. It is also of vast interest to every householder within the State.

The diseases that are the most dangerous to the health and lives of individuals in general have their origin in and about dwelling houses. The rich and the poor suffer alike to a great extent in this respect.

The active and energetic business man relies upon others of his household, as well as the capitalist and gentleman of leisure, to look after the sanitary condition of his premises, which should claim an equal attention with that of his daily business, for it is equally important for his welfare and prosperity. His very life and health depends upon this neglect.

He does not realize the danger until a dangerous and malignant disease has developed in his family, and that he has been living, as it were, over a smoldering volcano, and that at any moment may belch forth its poisonous vapors and engulf all.

With another class of people, whether landlord or tenant, with the energy and ambition of life lost in the struggle, they see nothing, they smell nothing, whilst the heat and moisture about them is hourly developing and bringing to perfection the means by which the black-winged messenger can soar about, and snatch from the bosom of the mother, by its icy and poisonous talons, the babe from the breast, or the husband from her side, crushing them to death and carrying them away.

Not only are the lives and health of the household jeopardized by an unsanitary condition of the premises of an individual, but those living in proximity thereto are threatened. Filth is regarded as one of the most important factors in

the development and propagation of disease, wherever it may exist, and it is absolutely essential for the preservation of health that it should be continuously and systematically removed from dwellings and surroundings.

Health is incompatible with filth and crowding, which we find in the houses of those with dissolute habits, which directly and indirectly breed disease from poor diet, crowding and the violation of all known sanitary and hygienic laws. The people must be instructed in the cardinal virtues of right living, when wise sanitary laws will be observed, otherwise a strict enforcement of them must be maintained by those in authority.

I have not the least doubt that it is the opinion of every experienced health officer that from house to house inspection is absolutely necessary for the preservation of the public health, and to prevent disease, and more especially at this time is it necessary from the fact that our country is being filled up yearly by hundreds and thousands of foreigners from every nation of the globe, whose habits and customs of living are so very different from Americans that they do not comprehend the necessity of sanitary measures whatever, and in whose abode the most dangerous and fatal diseases are generally developed, and demand the most rigid sanitary inspection.

In connection with this question we must be sure that we have a good sanitary law, upon which all our work as sanitarians can rest, built upon a sound legal foundation; one that is not uncertain as regards its provisions; one that will not be unsatisfactory as to its results, and one that can be enforced by the least possible legal technicality. Then health officers can discharge their duties and not suffer the humiliation of defeat in their efforts to abate the foulest nuisance that is threatening a neighborhood with its poisonous emanations. Under such a law an organization can be established, extending its branches into every county and town in the State.

It will require an army of resolute and intelligent men, possessing a good knowledge of the laws of hygiene and sanitation for the discharge of the important duty. They must be well drilled and organized for the battle in which they are about to engage, with a reserve force of warriors in close call in case of emergency, for they go to battle in the houses of their friends and neighbors; in the privacy of the household, which is held sacred to strangers in search of the enemy of mankind, and to find it, from house to house inspection is necessary.

You will not only find the enemy, but will arouse the people to a realization of the danger that exists, and they become interested in sanitation when the Boards of Health will become efficient.

But how to accomplish this great undertaking with the many obstacles and difficulties that await the inspector, requires careful consideration by those who have the legal authority to devise the course to pursue.

I would suggest that the cities and large towns be divided into districts; notices be given through the newspapers, or by posters within the districts, giving its boundaries and the names of the sanitary inspectors who will make an inspection of the district, commencing at a certain point in the district on a given date, under the supervision of the State and County Board of Health.

The inspector should inspect every dwelling and building, in company with the owner or occupant of the premises, from the cellar to the garret, giving instructions about what is necessary for the prevention of disease, as regards dwellings and their surroundings, which will include ventilation, decayed animal and vegetable matter, water closets, privy vaults, cesspools, drainage, sewerage, and the water supply for domestic purposes.

The work should be carefully, systematically and resolutely done, without offending landlord or tenant, until every public or private building, occupied or not, all ditches, drains and gutters within the district are viewed. It will require time, patience, and an exceedingly amiable disposition to accomplish the work by the inspector, to be satisfactory to the Health Department and the owners of the property.

Dr. Samuel Ferris, the efficient Health Officer of New Castle, has furnished me with his experience of from house-to-house inspection. In the spring of 1882 he made an inspection of the town (population, 3,000), with the effect of arousing the citizens to the importance of removing the accumulated filth. In the spring, summer and early fall months of 1885, he made a thorough inspection from house to house, when he ordered all privy vaults cleaned and filled with fresh earth, which was met with great opposition. He had removed from the town over 300 tons of excrement that was taken from the vaults. Those who opposed him then with curses bless him to-day. He had all the filth debris of all kinds carted into the country and burned, as far as possible. Every dwelling and building, public and private, received his inspection at least once a year. He says the responsibility of a health officer is great to be efficient, and that it reminded him of the Irishman, in shearing his hog, there was great squealing, but little wool, and if he had had the support of the corporation officers, with many of the citizens, he would have had more wool and less squealing.

He also asserts to his certain knowledge that the sickness of the town has abated one-half since the health law was established; and that vigilance, and kindness with firmness, are necessary on the part of the health officers; and that local Boards of Health are indispensable in any town or community.

How often should the inspection be repeated? I would suggest every spring, summer and autumn months.

In the autumn, before the provisions of every kind are stored away for winter use, before the windows, ventilators and crevices are closed against the coming chilly blasts of winter; and then on the approach of spring, with the seal of autumn yet upon the store houses and cellars, with their foul and musty air arising from decay, and that from the fruits and vegetables in the different departments, where the pure air of heaven and the rejuvenating sunshine have not penetrated for the third of a year; and the refuse from the cooking department decorating the premises in abhorrence, imbedded in the frozen ground and ice, gaining its freedom by the warming rays of the sun, and polluting the atmosphere about with an odor very different from that of spring flowers.

Then, again, the summer months, with the growth and decay of all animate nature, with stagnant pools and sluggish streams, drains and ditches, under the influence of the heating rays of a meridian sun, will demand the attention of the Sanitary Inspector.

This labor of the Health Department of the State will require time and money, and with the small amount at the disposal of this department a yearly sanitary survey, thorough in every respect, can not be accomplished, in my opinion.

The Health Department of the State must have ample means to engage in an organized battle for the prevention of disease in the State. With it this grand sanitary movement can go on, in opposition to the derision of the ignorant and irresponsible obstructionist of the great cause of humanity. The work is, in many cases, thankless and unappreciated.

With the means at the hands of the State Board of Health, they have done noble work; and it is certainly, from the vast work that they have accomplished,

extraordinary good management of the finances of the Secretary and the board, to have been so eminently successful in doing what they have, with satisfaction to the public and honor to themselves.

They have saved thousands of dollars to the people of the State alone, not considering the suffering and distress caused by preventable diseases they averted.

I would urge upon every health officer of the State to use every means possible with their representatives in the next Legislature to increase the appropriation so that the State Board of Health will not be embarrassed in improving the sanitary condition of the State at any time that it is demanded, for the want of financial aid.

A State that has been developed and brought to such a high state of excellence as Indiana is, with resources for its citizens, almost beyond, and scarcely equaled by any other State in the Union, and that illuminates the very heavens at night by its burning natural gas from the largest field in the depths of the earth, that all the world can see that it is the brightest star in our national firmament.

LIST OF PHYSICIANS.

ABBREVIATIONS:—R., for regular; E., for eclectic; H., for homeopathic; P. M., for physio-medical; N. R., for not reported; "Basis of License;" D., for diploma; figures 3 and 10 for number of years practice.

This list is furnished by County Health Officers, and any mistakes that occur in spelling of names or omission, are attributable to them.

The names of County Health Officers are printed in capitals.

Adams County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Aspy, H. M.	Geneva.	R. 3	Harper, J. L.	Pleasant Mills.	R. 10
Andrews, O. P. N.	Monroe.	R. D	Haughton, Asa.	Linn Grove.	R. 10
Brayton, Wm. F.	Geneva.	R. D	Holloway, M. L.	Decatur.	R. D
Bergman, Noah.	Berne.	R. 10	Hughes, Alex.	Pleasant Mills.	R. 10
Boyers, J. T.	Decatur.	R. D	May, O. T.	Monroe.	R. D
Beavers, S. D.	Decatur.	R. D	Mattox, L.	Geneva.	R. D
COSTELLO, H. F.	Decatur.	R. D	McDowell, Jacob.	Geneva.	R. 10
Coverdale, J. S.	Decatur.	R. D	Sprunger, Peter.	Berne.	H. 10
Clark, C. S.	Decatur.	E. D	Stonebumer, D.	Berne.	E. D
Dorwin, T. T.	Decatur.	R. 3	Trout, D. G. M.	Decatur.	R. D
Ford, A. C.	Geneva.	R. 3	Thomas, P. B.	Decatur.	R. D
Holloway, A. G.	Decatur.	R. 3	Ward, J. B.	Geneva.	R. D

Regular, 21; Homeopathic, 1; Eclectic, 2.

Allen County.

Adams, Horace.	Harlan.	R. 10	Jones, J. H.	Ft. Wayne.	N. R. 10
Allen, Daniel M.	Ft. Wayne.	R. 10	Kesler, R.	Ft. Wayne.	R. D
Bartels, R. W.	Ft. Wayne.	E. D	Kryder, John L.	Cedarville.	R. D
Banks, C. T.	Ft. Wayne.	D	Lipes, R. F.	Heller's Corner.	R. D
Barnett, W. W.	Ft. Wayne.	R. D	Leohard, P. M.	Ft. Wayne.	H.
Berg, K. Carl.	Ft. Wayne.	R. D	Lemon, Anna M.	Ft. Wayne.	R. D
Blade, Phillip.	Ft. Wayne.	E. 10	Lehmann, Anthony.	Ft. Wayne.	H. D
Boswell, A. C.	Ft. Wayne.	R. D	Lipes, A. G.	Ft. Wayne.	R. D
Boswell, A. J.	Ft. Wayne.	R. D	Mentzer, Simeon E.	Monroeville.	R. D
Bower, G. B. M.	Ft. Wayne.	R. D	Martz, Christian.	Ft. Wayne.	H. D
Bowen, G. W.	Ft. Wayne.	H. D	Metcalf, S. C.	Ft. Wayne.	R. D
Birchman, A. P.	Ft. Wayne.	R. D	Miller, J. E.	Ft. Wayne.	R. D
Biggs, Ross Harris.	Ft. Wayne.	R. D	Myers, Isaac N.	Maples.	R. D
Bulson, A. E., Jr.	Ft. Wayne.	R. D	Myers, Herschel S.	Ft. Wayne.	R. D
Brudi, A. C.	New Haven.	R. D	MYERS, WM. H.	Ft. Wayne.	R. D
Cary, D. B.	Ft. Wayne.	R. 10	Murphy, George.	Leo.	R. D
Chambers, J. D.	Ft. Wayne.	R. D	McComb, Wm. S.	Leo.	R. D
Coblentz, J. W.	Ft. Wayne.	R. 10	McCaskey, G. W.	Ft. Wayne.	R. D
Carter, Wm. J.	Ft. Wayne.	R. D	McCausland, J. W.	Ft. Wayne.	R. D
Cutshall, Geo. W.	Arcola.	R. D	McCormack, T. H.	Ft. Wayne.	R.
Conelly, W. A.	Monroeville.	R. D	McCullough, T. P.	Ft. Wayne.	R. D
Denpeller, R. R.	Ft. Wayne.	E.	McOscar, E. J.	Ft. Wayne.	R. D
Dilla, Thomas J.	Ft. Wayne.	R. D	McHugh, J. E.	Ft. Wayne.	R. D
Dinnen, James M.	Ft. Wayne.	R. D	Nieswonger, H. W.	Ft. Wayne.	R. 3
Duemling, H. A.	Ft. Wayne.	R. D	Nieschang, C. C. T.	Ft. Wayne.	R. D
Enslin, Wm.	Ft. Wayne.	R. D	Null, Lycurgus.	New Haven.	E. D
Engle, A.	Monroeville.	R. D	Nierman, H. G.		R. D
Ferguson, W. G.	Ft. Wayne.	R. D	Omo, Joseph J.	Harlan.	R. D
Ferguson, W. T.	Ft. Wayne.	R. D	Pierce, Jessie B.	Ft. Wayne.	R. D
Gard, Brookfield.	Ft. Wayne.	E. D	Porter, Miles T.	Ft. Wayne.	R. D
Garand, Narcissus.	Ft. Wayne.	R. 10	Poyneer, G. W.	Ft. Wayne.	R. D
Gilbert, Charles J.	New Haven.	R. D	Proegler, Carl.	Ft. Wayne.	R. D
Green, Frances M.	Ft. Wayne.	R. D	Phillips, S. F.	Ft. Wayne.	N. R. D
Greenawalt, G. L.	Ft. Wayne.	R. D	Rauch, A. J.	Ft. Wayne.	R. E
Greenwell, F.	Hunterstown.	R. D	Rosenthal, I. N.	Ft. Wayne.	R. D
Gunther, J. W.	Harlan.	R. 10	Rosenthal, Maurice I.	Ft. Wayne.	R. D
Harris, Ella.	Ft. Wayne.	H. D	Ross, George.	Ft. Wayne.	H. D
Harris, L. P.	Ft. Wayne.	H. D	Ruhl, Wm. DeLa.	Sheldon.	R. D
Hetrick, Jacob.	Ft. Wayne.	R. D	Schilling, Carl.	Ft. Wayne.	R. D
Heaton, C. E.	Ft. Wayne.	R. D	Schilling, John.	Ft. Wayne.	R. D
Herman, Alex. D.	Ft. Wayne.	M. R. D	Siver, E. L.	Ft. Wayne.	R. D
Harrod, Morse.	Ft. Wayne.	R. D	Schultz, Frederick.	Ft. Wayne.	E. D
Havice, S. H.	Ft. Wayne.	R. D	Snow, Wm. D.	Ft. Wayne.	N. R. 10
Holmes, Edward S.	Ft. Wayne.	R. D	Smith, Joseph L.	Hoagland.	E. D

Allen County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Stemen, C. B.	Ft. Wayne	R. D	Swift, C. F.	Harlan	R. D
Stemen, G. C.	Ft. Wayne	R. D	Seaton, John R. . . .	Ft. Wayne	R. 10
Stemen, G. B.	Ft. Wayne	R. D	Sledd, Samuel D. . .	Nine Mile	R. D
Stemen, William E. . .	Ft. Wayne	R. D	Traster, W. H. H. . .	Ft. Wayne	R. D
Stemen, Harrietta . .	Ft. Wayne	R. D	Tinkham, Melvin . .	Ft. Wayne	R. D
Saylor, Frank L. . . .	Ft. Wayne	R. D	Van Buskirk, A. E. .	Ft. Wayne	R. D
Stultz, C. E.	Ft. Wayne	R. D	Wheelock, Kent K. . .	Ft. Wayne	R. D
Sturgis, Lewis T. . . .	Ft. Wayne	R. D	Wheeler, Frederick . .	Ft. Wayne	D
Stutz, John A.	Ft. Wayne	H. D	Whery, Wm. P. . . .	Ft. Wayne	R. D
Sweringen, Hiram V. . .	Ft. Wayne	R. D	Whery, Mary A. . . .	Ft. Wayne	R. D
Sweringen, Budd V. . .	Ft. Wayne	R. D	Worley, George N. . .	Poe	R. D
Shutt, John M.	Harlan	N. R. 2	Young, John M. . . .	Ft. Wayne	R. D

Regular, 38; Eclectic, 8; Homeopathic, 8; not reported, 8.

Bartholomew County.

ARWINE, J. S.	Columbus	R. 10	Kincaid, S. F.	Tailorsville	E. D
Allen, W. H.	Waymansville . . .	R. 10	Kent, C. V.	Hope	R. D
Arwine, Lotta Ruth . .	Columbus	R. D	Kennedy, S. Y. . . .	St. Louis Crs'ng . .	R. D
Butler, C. H.	Clifford	R. 10	Kirkpatrick, Alva M. .	Columbus	R. D
Banker, A. J.	Columbus	R. D	Lawrence, W. M. . . .	Jonesville	E. 3
Butler, Wm. H.	Columbus	R. D	Leonard, John H. . .	South Bethany . . .	R. D
Barret, S. J.	Columbus	R. 10	Latham, A. P.	Columbus	H. D
Banker, W. T.	Columbus	R. D	Loder, C. C.	Columbus	R. D
Beck, W. H.	Hartsville	R. D	Mennett, O. H. . . .	Jonesville	R. D
Beck, Flavius J.	Hartsville	R. D	McLeod, A. J.	Columbus	R. D
Biddinger, S. W. . . .	Waynesburg	E. 10	McCoy, George F. . .	Columbus	R. D
Bernard, G. W.	Tailorsville	H. D	Morris, S. H.	Columbus	R. 3
Carmichael, W. T. . . .	Walesboro	PMD	Moore, C. A.	Columbus	E. D
Cosby, George O.	Burnsville	R. D	Norton, F. D.	Petersville	R. D
Clark, I. S.	Columbus	R. 10	Newton, W. T.	Hope	R. D
Davis, Joseph H. . . .	Azalia	R. 10	Roope, R. H.	Columbus	R. D
Dickman, Fred.	Hope	H. 10	Rice, A.	Columbus	H. D
Davidson, G. N.	Waynesville	PMD	Richards, F. B. . . .	Tailorsville	R. 10
Delong, O. A.	Azalia	PMD	Regemas, Eug. G. . .	Hope	R. D
Elrod, M. N.	Hartsville	R. D	Reynolds, S. H. . . .	Columbus	R. D
Fitzpatrick, Bart. . . .	Hope	R. D	Rains, G. W.	Jonesville	R. 3
Falk, Fred	Columbus	R. 10	Reynolds, G. E. . . .	Elizabethtown . . .	R. D
Francis, E. F.	Columbus	R. D	Shane, Y. A.	Columbus	H. D
Fogle, E. T.	Hartsville	E. D	Stapp, S.	Hope	R. 10
Fugate, Wm	Clifford	K. D	Smalley, J. K.	Hartsville	R. D
Griffith, L. B.	Hope	R. D	Stader, J. W.	Walesboro. No sch. 3	
Hudson, J. B.	Columbus	H. D	Thompson, D. A. . . .	Elizabethtown . . .	R. D
Hauzer, Z. H.	Columbus	R. D	Voris, S. M.	Columbus	R. D
Hawley, K. D.	Columbus	R. D	Wright, J. F.	Columbus	R. D
Holder, R. E.	Columbus	R. D	Wisner, W. E.	Columbus	R. D

Regular, 45; Eclectic, 6; Homeopathic, 5; Physio-Medical, 3; not reported, 1.

Benton County.

Baker, B. E.	Fowler	R. D	Lee, R. E.	Boswell	R. D
Boice, A. C.	Fowler	R. 3	Kolb, Jonathan	Oxford	R. 10
Crume, G. P.	Earl Park	R. D	Kinney, J. F.	Oxford	E. D
Christly, J. B.	Boswell	R. 10	Mavity, J. S.	Fowler	R. D
COOK, CLARK.	Fowler	R. D	Moore, A. V.	Ambia	R. D
Fall, C. W.	Oxford	R. 3	McConnell, H. C. . . .	Oxford	E. D
Green, Nellie E.	Fowler	R. 3	Roberts, S. R.	Oxford	R. 10
Green, J. W.	Boswell	R. 3	Rodman, J. M.	Fowler	R. 10
Gray, J. A.	Otterbein	R. D	Simpkins, J. C.	Boswell	R. 3
Gray, Wm. H.	Wadena	E. D	Smith,	Otterbein	R. D
Hunter, A. F.	Raub	E. D	Thompson, T. J. . . .	Otterbein	R. D
Hard, A. D.	Ambia	R. D	Wells, A. W.	Fowler	R. D

Regular, 20; Eclectic, 4.

Blackford County.

Alexander, J. T.	Hartford City . . .	H. 10	Harden, Alfred	Hartford City . . .	R. D
CLAPPER, M. M.	Hartford City . . .	R. D	Harden, Mrs. Alfred . .	Hartford City . . .	R. D
Cronin, W. N.	Hartford City . . .	R. D	Hunt, Thomas M. . . .	Mill Grove	R. 3
Cory, C. W.	Hartford City . . .	R. D	Landas, L. C.	Prairie	R. 10
Coble, Albert H.	Hartford City . . .	R. D	McFarland, J. E. . . .	Mill Grove	E. 10
Clouser, N. D.	Hartford City . . .	R. 10	Mason, C. R.	Hartford City . . .	R. 10
Davesson, H. C.	Hartford City . . .	R. D	Morrison, J. A.	Montpelier	R. D
Drayer, Peter	Hartford City . . .	R. D	Sage, J. W.	Hartford City . . .	E. D
Emshwiller, M. A. . . .	Montpelier	R. D	Wheeler, Wm. H. . . .	Hartford City . . .	H. 10
Frazier, S. S.	Roll	R. D	Wilt, W. W.	Montpelier	R. D
Harrold, J. R.	Roll	R. D	White, R. D.	Montpelier	H. 10

Regular, 15; Homeopathic, 3; Eclectic, 2.

Boone County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Alfred, J. S.	Zionsville	R. D	McCormick, M. S.	Big Springs	R. D
Austin, F. H.	Jamestown	E. D	McNutt, W. Y.	Zionsville	R. D
Ball, Joseph P.	Lebanon	E. D	Miller, A. O.	Lebanon	R. D
Ball, J. R.	Lebanon	R. D	Meyers, John M.	Terhune	R. D
Benington, A. M.	Max	R. 10	Dorman, W. A.	Lebanon	R. D
Bonnell, M. H.	Lebanon	R. D	Noe, W. H.	Thorntown	R. D
Banta, S. J.	Jamestown	R. 10	Porter, A. G.	Lebanon	R. D
Bonnell, Thos. A.	New Brunswick R. D		Porter, John R.	Lebanon	R. D
Brown, Eli P.	Thorntown	E. D	Reagan, Jesse S.	Lebanon	R. 10
Coons, H. N.	Lebanon	H. D	Redden, —	Whitestown	R. D
Cotton, H. L.	Zionsville	R. D	Rose, M. H.	Thorntown	R. D
Curryer, Wm. F.	Thorntown	E. D	Smith, Carter H.	Lebanon	R. D
Davis, David B.	Thorntown	N. R. 10	Scull, D. C.	Lebanon	R. 10
Everett, W. E.	White Lick	R. D	Schultz, W. H.	Lebanon	R. D
Finch, A. M.	Jamestown	N. R.	Steelsmith, J. M.	Kosston	R. D
Hardy, W. S.	Whitestown	R. D	Silvey, H.	Hazelrig	R. 10
FITCH, A. P.	Lebanon	R. D	Turner, Thos. S.	Milledgeville P.	M. D
Hawk, J. S.	Thorntown	R. 10	Trobridge, Reese	Lebanon	R. D
Heady, W. S.	Jamestown	R. D	Umberhine, C. D.	Reese Mills	R. D
Hamilton, J. A.	Advance	R. D	Van Nys, D. H.	Lebanon	R. D
Hart, Geo. K.	Elizaville	R. D	White, A. F.	Zionsville	N. R.
Jordan, Thos. N.	Whitestown	R. D	Walker, D. R.	Reese Mills	R. D
Jones, Alfred B.	Lebanon	R. D	Worley, O. P.	Elizaville	P. M. D
Kane, John R.	Kosston	R. D	Winters, Wm. H.	White Lick	R. D
Kellogg, N. P.	Lebanon	E. D	Wennick, —	Advance	R. D
McGeo, Jas. S.	Big Springs	P. M. D			

Regular, 40; Eclectic, 5; Homeopathic, 1; Physio-Medical, 3; not reported, 3.

Brown County.

Axom, Stanley.	Elkinsville	R. D	Moser, James P.	Spearsville	R. D
Browning, Nathan	Needmore	R. 3	Moscop, Stephen	Schooner	R. D
Campbell, James B.	Beanblossom	R. 10	ROSS, JOHN C.	Nashville	R. D
Fleemer, Joseph N.	Needmore	R. 10	Ralph, A. J.	New Bellville	R. D
Fritch, Joseph	Needmore	R. 10	Taylor, J. T. S.	Belmont	R. 3
Genolin, John F.	Nashville	R. D	Wilson, Samuel C.	Pike's Peak	P. M. 10
Griffith, Arnold S.	Nashville	R. D	Ward, James G.	Beanblossom	R. 3

Regular, 12; Eclectic, 1; Physio-Medical, 1.

Carroll County.

Angell, C. E.	Delphi	R. D	Morrow, J. L.	Delphi	R. D
Angell, Charles	Pittsburgh	R. D	Moore, A. G.	Carroll	R. 10
Armstrong, E. W.	Camden	R. D	Minnick, Horace P.	Flora	R. D
Armstrong, F. G.	Camden	R. 10	Loop, Wm. M.	Deer Creek	R. D
Brown, Nathaniel	Flora	E. 3	Lyons, Frank P.	Carroll	R. D
Coffman, J. S.	Cutler	E. D	Plank, W. H.	Deer Creek	R. D
Camp, Charles	Camden	E. D	Palmer, Robt. B.	Lockport	E. 10
Conway, P. W.	Ockley	R. D	Robinson, Frank H.	Delphi	H. D
Cromer, James R.	Flora	E. D	Shultz, E. A.	Delphi	E. D
Cook, A. J.	Flora	E. D	Shultz, J. J.	Delphi	E. D
Chittick, Andrew J.	Burlington	R. D	Sharrer, W. F.	Delphi	R. D
Carter, Henry	Bringinghurst	E. D	SCHOLL, C. E.	Camden	R. D
Carter, J. D.	Camden	E. D	Smith, Wickliff	Delphi	R. D
Clymer, —	Patton	E. D	Stewart, J. W.	Rockfield	R. D
Cochran, Isaac N.	Rodnor	R. D	Snyder, R. F.	Camden	R. D
Greer, J. G.	Patton	P. M. 10	Sonder, C. F.	Burrows	R. D
Gordon, Baltzer L.	Burlington	E. D	Trobaugh, Wm. A.	Cutler	R. D
Hall, J. D.	Camden	R. D	Tidrick, R. R.	Bringinghurst	R. D
Jackson, C. P.	Bringinghurst	E. 10	Walker, E.	Delphi	E. D
Kennard, J. L.	Yeoman	R. D	McClary, David	Deer Creek	R. D
Kidd, Walter J.	Burlington	E. D			

Regular, 24; Eclectic, 15; Homeopathic, 1; Physio-Medical, 1.

Cass County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Allen, James H. . . .	Logansport. . . .	H.	Justice, James M. . . .	Logansport. . . .	R.
Burton, John J. . . .	Royal Center. . . .	E.	Jordan, M. A. . . .	Logansport. . . .	E.
Baillard, J. W. . . .	Logansport. . . .	R.	Jones, Allen B. . . .	Logansport. . . .	R.
BUSJAHN, F. A. . . .	Logansport. . . .	R.	Keys, Thomas M. . . .	Logansport. . . .	10
Bell, Wm. H. . . .	Logansport. . . .	R.	Loop, L. W. . . .	Galveston	R.
Banta, Henry J. . . .	Logansport. . . .	R.	LaRose, Noah J. . . .	Lucerne	E.
Buchanan, A. M. . . .	Metia. . . .	10	Lynas, J. B. . . .	Logansport. . . .	10
Barnett, David C. . . .	Dow. . . .		Lyster, H. C. . . .	Logansport. . . .	D.
Bradfield, B. D. . . .	Logansport. . . .	R.	Lybrook, Wm. E. . . .	Young America. . . .	R.
Cady, Nelson W. . . .	Logansport. . . .	R.	Longenecker, O. B. . . .	Logansport. . . .	D.
Coleman, A. . . .	Logansport. . . .	R.	Million, David	Royal Center. . . .	E.
Clevenger, B. S. . . .	Logansport. . . .	10	Neff, J. N. . . .	Walton. . . .	R.
Campbell, Cyrus W. . . .	Logansport. . . .	R.	Powell, John L. . . .	Logansport. . . .	R.
Downey, Jasper A. . . .	Logansport. . . .	E.	Parish, H. D. . . .	Clymers	10
Dutchess, Charles P. . . .	Walton. . . .	R.	Quick, L. L. . . .	New Waverly. . . .	R.
Eckert, D. H. . . .	Lucerne	E.	Quick, K. H. . . .	New Waverly. . . .	R.
Ellis, Jonathan W. . . .	Walton. . . .	E.	Sterrett, Joseph E. . . .	Logansport. . . .	R.
Engler, Owen. . . .	Walton. . . .	E.	Stevens, Benjamin C. . . .	Logansport. . . .	R.
Poutz, David N. . . .	Royal Center. . . .	10	Shultz, J. B. . . .	Logansport. . . .	E.
Graham, Malcom. . . .	Royal Center. . . .	R.	Shultz, J. H. . . .	Logansport. . . .	E.
Graves, Arthur E. . . .	New Waverly. . . .	R.	Smith, J. S. . . .	Galveston	D.
Hallaman, Joseph	Logansport. . . .	R.	Taylor, Joseph L. . . .	Logansport. . . .	E.
Hattery, H. D. . . .	Logansport. . . .	R.	Thomas, C. L. . . .	Logansport. . . .	R.
Hermann, John. . . .	Logansport. . . .	R.	Talbott, J. W. . . .	Logansport. . . .	R.
Hermann, Arthur J. . . .	Logansport. . . .	R.	Wills, John B. . . .	Lincoln. . . .	R.
Henry, L. W. . . .	Logansport. . . .	10	Weyand, Isaac S. . . .	Royal Center. . . .	R.
Hotherington, J. P. . . .	Logansport. . . .	E.	Wagoner, Winston W. . . .	Logansport. . . .	R.
Hatch, Elmer M. . . .	Logansport. . . .	H.	Young, Julius H. . . .	Logansport. . . .	D.
Harding, G. W. . . .	Twelve Mile	R.			

Regular, 31; Eclectic, 13; Homeopathic, 2; not reported, 7.

Clark County.

Adair, S. L. . . .	New Wash't'n	R. D	Lewis, Benj	Utica	R. D
Bottomf, C. M. . . .	Charleston	R. D	Meloy, J. M. . . .	Sellersburg	R. D
Bruner, Jacob	Utica	R. D	McKinney, —	Sellersburg	R. D
Coombs, David H	Charlestown	R. D	McClure, David	Jeffersonville	R. D
Carr, F. M. . . .	Oregon	R. 10	McClure, Clarence	Jeffersonville	R. D
Duerson, W. F. . . .	Bethlehem	R. D	McClure, Sidney C. . . .	Jeffersonville	R. D
Davis, J. F. . . .	Jeffersonville	R. D	Martin, F. A. . . .	Jeffersonville	E. D
Elrod, E. L. . . .	Henryville	R. D	Nickels, J. M. . . .	Sellersburg	R. D
Field, D. L. . . .	Jeffersonville	R. D	Peyton, D. C. . . .	Jeffersonville	R. D
Ferguson, H. H. . . .	Henryville	R. D	Ruddell, I. N. . . .	Jeffersonville	R. D
Graham, T. A. . . .	Jeffersonville	R. D	Russell, Jas. R. . . .	Nabbs	R. D
GRAHAM, O. P. . . .	Jeffersonville	R. D	Reynolds, L. M. . . .	Memphis	R. D
Gaddy, Edwin R., col. . . .	Jeffersonville	R. D	Runcie, G. U. . . .	Jeffersonville	R. D
Hening, Robt	Jeffersonville	R. D	Shuts, W. W. . . .	Jeffersonville	R. D
Hancock, C. F. . . .	Jeffersonville	R. D	Secoy, Solomon H. . . .	Jeffersonville	H. D
Haymaker, Geo. W. . . .	Charlestown	R. D	Stalker, B. F. . . .	New Providence	R. D
Hauss, Q. R. . . .	Sellersburg	E. D	Taggart, Jos	Solon	R. D
Hart, Douglass	Sellersburg	R. D	Taggart, Jos	Solon	R. D
Hertzsch, Della. . . .	Jeffersonville	R. D	Taggart, S. C. . . .	Charlestown	R. D
Jackson, Sallie C	Jeffersonville	R. D	Veazey, T. Reed	Charlestown	R. D
Jones, Cad	Charlestown	R. D	Wells, Edwin M. . . .	New Wash't'n	R. D
Hobbs —	New Wash't'n	R. D	Walker, J. H. . . .	Jeffersonville	R. D
Lampton, Geo. W	Jeffersonville	R. D	Work, W. F. . . .	Charlestown	R. D
Loomis, Jno	Jeffersonville	H. D	Williams, L. L. . . .	Utica	R. D
Louis, Jessie D. . . .	Jeffersonville	R. D	Zuerner, Jos	Jeffersonville	R. D

Regular, 46; Eclectic, 2; Homeopathic, 2.

Clay County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Allen, Hiram P.	Bowling Green.	R. 10	Moss, James K.	Ashboro	R. D
Bartholomew, N. B.	Poland	R. 3	Modesitt, James A.	Cory	R. D
Byers, Leonidas S.	Staunton	R. 3	McCullough, F. M.	Staunton	R. D
Black, Silas D.	Brazil.	R. D	NALL, ALBERT H.	Brazil.	R. D
Benell, Charles.	Prairie City.	R. D	Nussel, Frederick.	Brazil.	R. D
Culbertson, R. H.	Brazil.	R. D	Pell, Geo. M.	Carbon	R. D
Chamberlain, Wm. F.	Poland	R. D	Rundell, A. E.	Centre Point	R. D
Cushman, David W.	Cloverland	R. D	Smith, Jacob F.	Brazil.	R. D
Davis, T. T.	Knightsville	R. 3	Siddons, James O.	Harmony	R. 10
Elliott, Thomas A.	Poland	R. D	Siner, F. M.	Knightsville	R. D
Finley, Geo. W.	Harmony.	R. 3	Swinehart, Moses H.	Asherville	P.-M. 10
Freed, Martin A.	Clay City	R. D	Spellbring, B. F.	Saline City	E. 3
Foreman, Joe.	Clay City	R. 10	Tully, A. F.	Brazil.	R. D
Glasco, Thomas A.	Brazil.	R. 3	Thornton, Felix G.	Knightsville	R. 3
Gifford, Joseph C.	Brazil.	R. D	Talbot, Edward	Bowling Green.	R. D
Gants, Richard.	Saline City	R. 10	Vansandt, Wm. H.	Carbon	R. D
Gilbert, Fletcher.	Cardonia	E. 3	Vesch, Patrick H.	Staunton	R. D
Holmes, Benj. F.	Asherville	R. D	Wolfe, C. H.	Clay City	R. D
Hale, Levi A.	Martz.	R. 10	Witty, B. W. F.	Perth	R. 10
James, Oliver J.	Cory	R. D	Williams, John.	Bowling Gr'n P.-M. 10	

Regular, 36; Physio-Medical, 2; Eclectic, 2.

Clinton County.

Abston, Jerse M.	Sedalia	R. D	Lambert, I. C.	Manson	P.-M. D
Andrews, James	Colfax	H. D	Lyons, James H.	Hilliaburg	R. D
Bergen, E. D.	Frankfort	H. D	McGuire, Wm. H.	Frankfort	E. D
Bowers, Burton E.	Kirklin.	R. D	McMurray, J. S.	Frankfort	R. D
Bowers, Valentine	Frankfort	R. D	McMurray, A. S.	Frankfort	R. D
Bogan, Elisha W.	Kirklin.	R. D	Milburn, Joseph E.	Colfax	R. 10
Brown, George W.	Frankfort	R. D	Milburn, Robt. C.	Manson.	R. 3
Coon, Hiram J.	Colfax	R. D	Morrison, O. A. J.	Middlefork	R. D
Canfield, Moses S.	Frankfort	E. D	Martin, Marquis L.	Forest	R. 10
Cooper, Wm. E.	Pickard's M. P.	M. D	McRich Fannie.	Frankfort	R. D
Cooper, Wilson T.	Scircleville.	R. D	Palmer, R. F.	Frankfort	R. D
Cox, Timothy B.	Frankfort	R. D	Parker, A. P.	Kirklin	R. 3
Coble, Albert H.	Frankfort	R. D	Parker, Joseph.	Colfax	R. D
Chittick, Charles.	Frankfort	R. D	Peter, Ed. L.	Moran	R. D
Dearth, M. H.	Jefferson	R. 10	Peter, D. C.	Forest	R. D
Dunn, Joseph R.	Pickard's Mills.	R. D	Pfeffley, Wm. F.	Frankfort	E. 3
Davis, Newton C.	Frankfort	H. D	Powell, Thos. J.	Michigantown	R. D
Douglass, Isaac W.	Michigantown	R. D	Robinson, Thos. B.	Rossville	R. D
Douglass, Samuel	Frankfort	R. 10	Randall, Wm. B.	Pickard's Mills.	10
Earhart, Isaac S.	Mulberry	R. D	Swisher, F. M.	Frankfort	P. M. D
Edmonds, Oscar W.	Frankfort	R. D	Seawright, John R.	Frankfort	R. D
Fisher, John J.	Rossville.	R. D	Strange, William.	Frankfort	R. 10
Fall, Wm. D.	Kirklin.	R. 10	Seigler, Jno. N.	Geetingsville.	R. 3
Fisher, Samuel B.	Rossville.	R. 10	Schwinn, Evan E.	Kirklin	R. D
Gard, Oliver	Frankfort	R. D	Speitel, Henry B.	Frankfort	E. 10
Holmes, W. A. T.	Kirklin.	R. 3	Saylor, Andrew J.	Frankfort	E. D
Holmes, H. D.	Scircleville.	R. 10	Smith, Wm. G.	Scircleville.	R. D
Holmes, Theo. T.	Pickard's Mill.	R. 10	SIMS, S. B.	Frankfort	R. D
Hornaday, Wm. H.	Forest	R. D	Thorp, Levi.	Boyleston	R. D
Holmes, James H.	Manson	R. D	Wise, James B.	Frankfort	R. D
Huntsinger, Eli	Frankfort	H. D	Wilson, Alex M.	Frankfort	R. 10
Knapp, S. O.	Frankfort	R. D	Yundt, A. M.	Mulberry	R. D
Koons, Monroe T.	Mulberry.	R. D	Young, M. V.	Frankfort	R. D

Regular, 52; Eclectic, 5; Homeopathic, 5; Physio-Medical, 3; not reported, 1.

Crawford County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Baylor, G. W.	Milltown	R. D	Hawn, Jno. A.	Leavenworth	R. D
Brown, Sylvester L.	Eckerty	R. 10	Knight, Jno. B.	Mt. Prospect	R. 3
Byrn, Spencer	Marengo	R. D	King, N. W.	Taswell	R. 10
Brown, Geo. W. L.	Eckerty	R. 10	LUCKETT, CHAS. D.	Engish	R. D
Brown, Jno. F.	Miffin	R. 10	Merrilees, Wm. M.	Leavenworth	H. 10
Cole, W. A.	English	R. D	Mitchell, I.	Eckerty	R. 10
Gobbell, F. R.	Grantsburg	R. 3	Myers, J.	Alton	R. D
Gibbs, Jno. H.	Milltown	R. D	Meeks, L.	West Fork	R. 10
Holland, W. M.	Milltown	R. 10	Setser, H. H.	Leavenworth	R. D
Hammond, Jno. M.	English	R. D	Stewart, L. B.	Marengo	H. 10
Hazlewood, Jno.	Eckerty	R. D	Traugatt, Geo. B.	Milltown	R. D
Hollerof, Wm. R.	Alton	R. 10	Walls, Jno. W.	Eckerty	R. D

Regular, 22; Homeopathic, 2.

Daviess County.

Anderson, W. B.	Washington	R. D	Oppelt, E. A.	Cannellburgh	R. D
Anderson, J. W.	Odon	R. D	Parr, G. L.	Washington	R. D
Achor, J. M.	Cornettsville	R. 10	Peck, S. W.	Washington	R. D
Bigham, A. W.	Montgomery	R. D	Park, J. F.	Cumback	R. D
Clarke, D. R.	Epsom	R. 3	Ragsdale, M. H.	Elnora	R. 3
Clark, J. W.	Washington	R. D	Scudder, Charles	Washington	R. D
Culmer, S. O.	Odon	R. D	Scudder, C. P.	Washington	R. D
Culmer, G. F.	Odon	R. D	Scudder, J. A.	Washington	R. D
Dearmin, J.	Odon	E. 10	Strouse, W. H. H.	Washington	H. 10
Deffendell, W. B.	Washington	H. D	Scanlan, M.	Washington	R. D
Evans, W. L.	Loogootee	R. 10	Smith, D. J.	Odon	R. D
Fitzgibbon, John	Washington	R. D	Sears, Barton	Odon	R. 10
Faith, A. H.	Plainville	R. D	Scott, J. T.	Elnora	R. D
Gers, H.	Washington	R. D	Stewart, F. J.	Glendale	R. D
Harned, F. M.	Washington	R. D	Stanley, L. Allen	Epsom	R. 10
Harrall, W. A.	Washington	H. 10	Smoat, D. E.	Glendale	H. D
Hedrick, J. T.	Alfordsville	H. 10	Toliver, M. P.	Elnora	R. 10
Hobbs, W. P.	Raglesville	R. 10	Toliver, M. J.	Elnora	R. D
Hillburn, E. W.	Washington	R. D	Wolf, H.	Washington	R. D
Lane, A. K.	Odon	R. 10	WILLEFORD, G. W.	Washington	R. D
Moore, J. L.	Washington	R. D	Willeford, W. C.	Washington	R. D
Moore, C. C.	Washington	R. D	Walls, W. H.	Alfordsville	R. 10
Millie, E. D.	Plainville	R. 10	Winton, C. F.	Washington	R. D
McPherson, S. L.	Montgomery	R. D	Way, J. W.	Alfordsville	R. D
McCown, C. C.	Washington	R. D	Young, W. L.	Odon	E. D
McKittick, O. H.	Plainville	R. D	Young, C. E.	Odon	E. D
Mitchell, R. S.	Alfordsville	R. D			

Regular, 46; Eclectic, 4; Homeopathic, 3.

Dearborn County.

Bond, R. C.	Aurora	R. D	Lord, T. J.	Dillsborough	E. D
Barkley, J. M.	F'mer's Ret're't.	R. D	Lazenby, J. R.	Miller Tp.	R. D
Burtenshaw, T. F.	Drewersburg	E. D	Lamb, James	Aurora	R. D
Bond, E.	Lawrenceb'gh	R. 10	Liddle, J. R.	Bright	R. D
Bowers, A. J.	Mooreville	R. D	Libbert, E. J.	F'mer's Ret're't.	R. D
Craig, G. E.	Lawrenceb'gh	R. 3	Rectanus, F.	Aurora	R. D
Collins, S. H.	Lawrenceb'gh	R. D	Ratcliff, J. F.	New Alsace	R. 3
CHAMBERLAIN, S. B.	Lawrenceb'gh	R. 10	Sale, F. H., Jr.	Aurora	R. D
Crocker, F. L.	Manchester	R. D	Sale, J. H.	Dillsborough	R. D
Daughters, B. P.	Moore's Hill	R. 10	Sale, F. H., Sr.	Dillsborough	R. D
Duncan, James M.	Sparta	R. D	Swales, H. W.	New Alsace	R. D
Dunian, Wm. F.	Manchester	R. D	Swales, W. H., Sr.	Logan	R. D
Ford, O. P. M.	Dillsborough	R. D	Swales, W. H., Jr.	Logan	R. D
Fiermier, P.	Weisburg	R. D	Spaulding, John	Dillsborough	R. D
Freiland, J. L.	Weisburg	R. D	Schooley, Wm. A.	Guilford	R. D
Gatch, J. D.	Lawrenceb'gh	E. D	Smith, Edwin	Aurora	H. D
Givan, S. E.	Manchester	R. D	Sutton, H. H.	Aurora	R. D
Henry, W. C.	Aurora	R. D	Thomas, M. L.	Harrison	R. D
Heston, C.	Aurora	R. D	Trutt, G. W. C.	Guilford	R. D
Hause, J. W.	Kyle	R. D	Wolfe, George	Lawrenceb'gh	H. D
Hiber, C.	Harrison	R. D	Wesver, S. M.	Dillsborough	E. D
Hayward, M. P.	Lawrenceb'gh	H. D	Walters, C. G.	Lawrenceb'gh	R. 10
Kyle, G. M.	Aurora	R. D	Willette, W. H. H.	Harrison	R. D
Kyle, J. J.	Aurora	R. D			

Regular, 40; Eclectic, 4; Homeopathic, 3.

Decatur County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Alexander, John H	Greensburg.	R. D	Howard, J. W	St. Paul.	R. 3
Bracken, William	Greensburg.	R. 10	Hause, William	Westport.	E. D
Bunker, C. L.	Greensburg.	E. D	Heuser, Conrad.	Milhouse.	H. 10
Beal, C. M.	Clarksburg.	R. D	Hicks, John C.	Napoleon.	R. D
Ballard, D. J.	St. Paul.	R. D	Johnson, Thos.	Greensburg.	R. D
Burroughs, Jas. P.	Westport.	R. 10	Jermain, Loda W. D.	Newpoint.	R. D
Butler, Wm. G.	Clifty.	H. D	Johnson, Henry	Newpoint.	R. 3
Bailey, Alvin L.	St. Paul.	R. D	Jacks, Jas. R.	Sandusky.	E. D
Biddinger, S. W.	Waynesburg.	R. D	Miller, T. E. F.	Westport.	H. D
Clarke, Geo. E.	Waynesburg.	R. D	Parker, John W.	Adams.	E. 10
Crawford, Geo. S.	Clifty.	R. D	Riley, Wm. E.	Sardina.	E. D
Cain, Cornelius	Clarksburg.	R. 10	Riley, J. H. S.	Sardina.	R. D
Covert, Cornelius A.	Greensburg.	R. D	Smith, John L.	Clarksburg.	R. D
Dailey, F. M.	Milhouse.	R. 10	Schofield, J. V. S.	Greensburg.	R. D
Depew, Richard J.	St. Paul.	R. D	Thomas, Richard M.	Greensburg.	R. D
Jowden, Amos W.	Newpoint.	R. D	Vest, Milton C.	Newberg.	R. 3
Goff, Wesley S.	St. Paul.	H. 10	Wright, Samuel V.	Greensburg.	R. D
GULLEFER, T. B.	Greensburg.	H. D	Wooden, Wm. H.	Greensburg.	R. D
Grant, Fernando A.	Clifty.	R. 3	White, Benj. S.	Sardina.	R. 3
Hitt, J. Y.	Greensburg.	R. D	Webb, M. H.	Adams.	R. 10
Hitt, Sherman B.	Greensburg.	R. D	Woods, Jas. M.	Gaynorsville.	R. D
Howard, Francis M.	St. Paul.	R. D	Williams, Myron H.	Lett's Corner.	R. D

Regular, 34; Eclectic, 5; Homeopathic, 5.

Dekalb County.

Allen, Wm. S	Auburn	R. 10	Ford, J. H	Auburn	R. 10
Barnett, Jos	Butler	R. D	Greenwald, M. J.	Auburn Juno	E. 10
Bevier, Wm	Waterloo	E. D	Lewis, James V.	Butler	R. D
Brown, N. E.	Hamilton	R. D	Mathena, T. G.	Auburn	R. D
Bowman, N. H.	St. Joe	R. D	Merser, W. L.	Corunna	R. D
BROUGHTON, F.	Waterloo	R. D	Nusbaum, W. H.	Auburn	R. D
Brown, M. M.	Corunna	R. D	Rudolph, O. F.	Corunna	R. D
Buchtel, I. O.	Auburn	H. D	Swartz, Vesta	Auburn	R. D
Cameron, John	Hamilton	R. D	Swartz, D. J.	Auburn	R. D
Carpenter, W. P.	Butler	R. D	Sebering, D. A.	Auburn	R. 10
Chamberlain, J. N.	Waterloo	R. D	Sargent, T. C.	Garrett	R. D
Casebeer, Jacob B.	Auburn	R. D	Sheffer, B. F.	St. Joe	E. D
Carpenter, Thos. J.	Waterloo	R. D	Stevens, Chas.	Garrett	R. D
Clevenger, James A.	Garrett	R. 10	Wood, T. B.	Garrett	R. D
Darby, A. B.	Waterloo	E. D	Thompson, W. H.	Garrett	R. D
Farrington, A. S.	Waterloo	E. 10	Hine, S. H.	Auburn	R. D

Regular, 25; Eclectic, 5; Homeopathic, 1; not reported, 1.

Delaware County.

Allen, Seth	Muncie	R. D	Harris, Jesse M.	Muncie	R. 10
Ames, George F.	Eaton	R. D	Hastings, Seth G.	Muncie	H. D
Brandon, W. S.	Daleville	R. D	Hayden, J. H.	Stout	P. M. D
Baird, John V.	Albany	E. 3	Jackson, Frank G.	Muncie	R. 3
Bell, John N.	New Burlington	R. D	Jones, Auburn C.	Muncie	H. D
Buckland, Geo. W.	Muncie	R. D	Julian, James F.	New Corner	E. D
Bunch, R. A.	Muncie	E. D	Kemper, G. W. H.	Muncie	R. D
Bowers, Jos. F.	Muncie	R. D	Le Favour, Joseph L.	Albany	R. 3
Bowles, Thomas J.	Muncie	R. D	Leech, Garrett D.	Muncie	R. D
Boyd, W. J.	Muncie	R. D	Lemon, Anna M.	Muncie	R. D
Cecil, A. A.	Cowan	R. D	Marshall, Reuben.	Cowan	R. D
Comstock, J. S. D.	Cowan	R. 10	Mansfield, T. J.	Royerton	N. R. D
Cornelius, W. W.	Daleville	R. 10	[Am. Health Col., Cin., O.]		
Cottrell, D. W.	Muncie	R. 10	Martin, John S.	Muncie	H. D
COWING, H. A.	Muncie	R. D	McCrillius, Chas. C.	Muncie	R. 3
Downing, J. R.	Yorktown.	R. D	Miller, Mrs. Elizb'th	Muncie	H. D
Driscoll, W. E.	Muncie	R. D	Munsey, D. O.	New Corner.	R. D
Dill, N. C.	De Soto.	R. D	Murray, Albert P.	Albany	R. D
Dunn, W. H.	Muncie	R. D	Murray, Albert L.	Eaton	R. 10
Eastes, Wm. T.	Muncie	R. D	Mitchell, Harvey.	Muncie	R. 10
Fallis, Amos L.	New Corner	P. M. D	Payton, Lewis.	Muncie	P. M. D
Flowers, Mrs. B.	Muncie	P. M. D	Phinney, Arthur J.	Muncie	H. D
Good, Alonzo H.	Delma.	R. 10	Polk, E. E.	Muncie	P. M. D
Green, George R.	Muncie	R. D	Puckett, Elijah J.	Muncie	R. D

Delaware County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Quick, John C.	Muncie.	P.-M. D	Stick, Jesse.	Albany.	E. D
Ross, John C.	Muncie.	E. 3	Shaneb, Daniel.	Muncie.	N. R. 10
Reid, S. M.	Muncie.	E. D	Snell, Solomon.	Muncie.	E. 10
Rogers, Wm. R.	Shideler.	R. 10	Schriver, Elizabeth.	Muncie.	N. R. 10
Reasoner, Osmer I.	Shideler.	R. D	Searcy, G. H.	Muncie.	R. D
Ricks, Martin W.	Muncie.	P.-M. D	Trent, I. N.	Muncie.	R. D
Shields, Edgar A.	Muncie.	R. D	Trowbridge, David L.	Muncie.	E. 10
Spurgeon, Wm. A.	Muncie.	P.-M. D	Tuttle, John R.	Wheeling.	R. 3
Smith, A. K.	Muncie.	H. D	Winnas, H. M.	Muncie.	R. D
Smith, Chas. W.	Selma.	R. D	Whitney, W. D.	Muncie.	H. D
Shively, David M.	Yorktown.	R. 10	Whitney, Mrs. E. A.	Muncie.	H. D
Shideler, Joseph K.	Muncie.	R. 10	Williams, J. R.	Eaton.	R. D
Summers, Henry C.	Daleville.	R. 10			

Regular, 49; Eclectic, 7; Homeopathic, 7; Physio-Medical, 7; not reported, 3.

Dubois County.

Bassinger, J. H.	Kyana.	R. D	Knapp, Victor	Ferdinand.	R. D
Bean, A. M.	Ireland.	E. D	Line, Wm. A.	Hillham.	R. 10
Beardsley, H. C.	Holland.	H. D	Lukemeyer, E. G.	Huntingburgh.	R. D
Bigham, O. A.	St. Anthony.	R. D	McAdams, L. C. C.	Celestine.	R. D
BRANNOCK, B. B.	Jasper.	R. D	McMahan, W. R.	Huntingburgh.	R. D
Coble, P. L.	Dubois.	R. 3	Montgomery, Geo. B.	Huntingburgh.	R. D
Faulkner, J. F.	Bird's Eye.	— 10	Rust, W. F.	Holland.	R. D
Glezen, E. A.	Ireland.	R. 10	Ramsbrok, C. E.	Huntingburgh.	R. D
Gobbel, Frederick.	Bird's Eye.	R. D	Salb, John P.	Jasper.	R. D
Genglebach, E. E.	Huntingburgh.	E. D	Schwartz, C. W.	Huntingburgh.	R. D
Hazelwood, Geo.	Bird's Eye.	R. D	Stephenson, Edward.	Jasper.	R. 10
Hermann, W. H.	Schnellville.	R. D	Stork, H. W.	Holland.	R. D
Herkins, J. M.	Portersville.	R. D	Whittinghill, B. F.	Hillham.	— 10
Johnson, John R.	Celestine.	E. D	Williams, G. P.	Huntingburgh.	R. D
Kempf, E. J.	Jasper.	R. D	Wollenmann, A. G.	Ferdinand.	R. D

Regular, 24; Eclectic, 3; Homeopathic, 1; not reported, 2.

Elkhart County.

Aitkins, F. M.	Bristol.	R. D	Keene, Daniel P.	Goshen.	R. D
Ash, Elmer E.	Goshen.	R. D	Knepple, W. H.	Wakarusa.	R. 3
Ash, W. U.	Middlebury.	R. D	Kreider, M. K.	Goshen.	H. D
Baker, D. W.	Benton.	R. 10	Kreider, W. B.	Goshen.	H. D
Barbour, J. E.	Bristol.	H. D	Kyler, W. B.	Benton.	R. 10
Barney, Lee M.	Elkhart.	R. D	Latta, M. M.	Goshen.	R. D
Baumgartner, C. C.	Elkhart.	R. 10	Larimer, B.	Millersburg.	R. D
Beyerle, H. J.	Goshen.	R. D	Lockwood, R. L.	Wakarusa.	H. D
Bower, C. C.	Elkhart.	R. D	Martin, S. E.	Elkhart.	E. 10
Bowman, W. E.	Elkhart.	R. D	Mathews, James.	New Paris.	R. D
Bowser, J. M.	Goshen.	R. D	Merrill, Chester W.	Goshen.	R. D
Brumbaugh, Melvin.	Gravelton.	P.-M. D	Miles, F. L.	Elkhart.	R. D
Croper, Andrew J.	Elkhart.	R. D	Miller, D. L.	Goshen.	R. D
Cassell, Elizabeth.	Elkhart.	R. D	Montgomery, T.	Elkhart.	R. 10
Clark, Stephen T.	Elkhart.	R. D	Myers, J. W.	Goshen.	E. D
Chaffer, Frank.	Bristol.	R. D	Neal, W. A.	Elkhart.	R. D
Defrees, Henry J.	Nappanee.	R. D	Niman, C. H.	Elkhart.	R. D
Dreese, C. L.	Goshen.	R. D	Peck, M. Eva.	Goshen.	R. 3
Eckleman, F. C.	Elkhart.	R. D	Putt, F. S.	Middlebury.	R. D
Eisenbeiss, Samuel.	New Paris.	R. 10	Robrig, F. J.	Goshen.	R. D
Eisenbeiss, Albert.	New Paris.	R. D	Sensenich, Aaron.	Wakarusa.	R. D
Fisher, A. L.	Elkhart.	H. 10	Shoemaker, Geo. L.	Nappanee.	R. D
Frink, C. S.	Elkhart.	R. D	Short, I. W.	Elkhart.	R. D
Frink, C. W.	Elkhart.	R. D	Searer, Christian.	Elkhart.	R. D
Greiner, G. G.	Vicula.	R. 3	Seapp, Jas. A.	Millersburg.	R. D
Haggerty, R. Q.	Elkhart.	R. D	Sparklin, C. C.	Goshen.	R. 10
Hani, W. F.	Elkhart.	R. D	Spohn, Geo. W.	Elkhart.	R. D
HEATWOLE, J. H.	Goshen.	E. 10	Stauffer, H. R.	Nappanee.	R. D
Herring, Frederick.	Goshen.	E. 10	Testers, B. F.	Middlebury.	R. D
Hoover, John S.	Millersburg.	H. 10	Thomas, W. H.	Elkhart.	H. D
Hoover, John M.	Goshen.	R. D	Turner, Porter.	Elkhart.	H. D
Horton, Mrs. Alice.	Elkhart.	R. D	Whippy, W. A.	Goshen.	H. 3
Inks, John S.	Nappanee.	R. D	Whippy, Geo. A.	Goshen.	H. D
Irwin, A. J.	Goshen.	R. D	Whitney, B. F.	Goshen.	R. D
Jackson, Amos C.	Goshen.	R. 10	Work, J. A.	Elkhart.	R. D
Jennings, J. W.	Millersburg.	R. D	Vallette, W. O.	Goshen.	R. D
Johnson, W. W.	Goshen.	R. D	Zimmerman, Ann.	Bristol.	R. 10
Kaufman, Anna G.	Goshen.	E. 10			

Regular, 62; Homeopathic, 11; Eclectic, 4; Physio-Medical, 1.

Fayette County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Chitwood, Geo. R . . .	Connersville . .	R. D	Ludwick, Vernor . . .	Connersville . .	R. D
Chitwood, Joshua . . .	Connersville . .	R. D	Phares, O. P	Connersville . .	R. D
CHITWOOD, J. E . . .	Connersville . .	R. D	Rea, Chas. L	Falmouth	R. D
Chitwood, Frank A . .	Connersville . .	R. 10	Roberts, Mrs. E . . .	Connersville P. .	M. D
Dailey, Jesse J	Orange	E. 10	Sipe, Robt. W.	Orange	R. D
Derbyshire, Ephraim .	Bentonville . .	R. D	Shepard, Solomon D .	Everton	R. D
Dillman, Larton D . . .	Connersville . .	R. D	Smalley, John G . . .	Connersville . .	R. D
Ford, Thos. J.	Connersville . .	R. D	Smalley, Mrs. Maude .	Connersville . .	R. D
Gregg, Vincent H . . .	Connersville . .	R. 10	Tingley, U. B.	Harrisburg . . .	R. D
Hamilton, Sam'l N . . .	Connersville . .	R. D	Turner, John	Null's Mills . . .	E. 10
Heron, Nathan	Connersville . .	R. 10	Tyrrell, A. D	Connersville . .	E. 10
Hornung, Frank G . . .	Connersville . .	R. D	Vance, Sam'l W	Connersville . .	R. D
Larimore, J. D	Connersville . .	R. D	Wall, John	Connersville . .	R. 10
Logee, W	Connersville . .	H. D	Wyman, Chas	Connersville . .	R. D

Regular, 22; Eclectic, 3; Homeopathic, 2; Physio-Medical, 1.

Floyd County.

Bowman, Chas	New Albany . .	R. D	McIntyre, C. W., jr. .	New Albany . .	R. D
Beust, Max	New Albany . .	R. D	Maienthal, Benj. L . .	New Albany . .	R. D
Beust, Bernhart . . .	New Albany . .	R. D	Needham, H. J	New Albany . .	H. D
Burney, W. A	New Albany . .	R. D	Nent, T. C	New Albany . .	R. 10
Borsig, J. R	New Albany . .	R. D	PAYNE, JOHN N	New Albany . .	R. D
Buly, David M	New Albany . .	R. D	Rogers, S. T	New Albany . .	E. D
Clapp, Wm. A	New Albany . .	R. D	Rutherford, R. S . . .	Greenville . . .	R. D
Cannon, Geo. H	New Albany . .	R. D	Stewart, John L . . .	New Albany . .	R. D
Cook, Chas. P	New Albany . .	R. D	Starr, Wm. L	New Albany . .	R. D
Davis, J. M	Greenville . .	R. D	Sigmon, E. L	New Albany . .	R. D
Davis, C. P	Galena	H. D	Sheppard, R. Y	Silver Grove . .	R. D
Easley, E. P	New Albany . .	R. D	Severinghaus, E. A . .	New Albany . .	R. D
Erni, Geo. O	New Albany . .	H. D	Taggart, W	Georgetown . .	R. D
Garey, Dumont	New Albany . .	R. D	Untz, H. C	Greenville . . .	R. D
Gresham, Geo. W . . .	New Albany . .	R. D	Vance, W. O	New Albany . .	R. D
Haris, Robert W	New Albany . .	R. D	Wilcox, S. C	New Albany . .	R. D
Hauss, A. P	New Albany . .	E. D	Wilcox, F. H	New Albany . .	R. D
Lemon, John H	New Albany . .	R. 10	Wolfe, H. S	New Albany . .	R. D
Levi, L. D	New Albany . .	H. D	Williams, Wm. R . . .	Greenville . . .	R. D
McIntyre, C. W., sr. .	New Albany . .	R. D	Weathers, W. R	New Albany . .	R. D

Regular, 34; Homeopathic, 3; Eclectic, 2.

Fountain County.

Armstrong, Louis P . .	Newtown	R. D	Mendenhall, E. W . .	Harveysburg . .	R. 10
Aydellotte, Thomas B .	Newtown	R. D	Orrahood, Job D . . .	Cole Creek . . .	R. D
Burlington, C. B . . .	Attica	E. D	Parker, John	Mellott	R. 3
Brackney, M. F	Wallace	R. D	Pettitt, M	Veedersburg . .	R. D
Cole, Wm. C	Attica	R. D	ROWLAND, GEO	Covington . . .	H. D
Coggins, C. M	Cole Creek . . .	R. D	Riffe, John S	Veedersburg . .	R. D
Case, Mervin F	Attica	R. D	Rice, J. T	Attica	R. D
Dawden, J. W	Yeddo	E. 10	Rupert, Archie M . . .	Attica	R. D
Fine, E. M	Steam Corners .	R. D	Stout, Wm. R	Hillsboro . . .	R. D
Finney, Chas. J	Attica	R. D	Sparks, Joseph T . . .	Yeddo	H. 10
Hayes, Geo. C	Hillsboro . . .	R. D	Shoaf, Francis A . . .	Yeddo	R. D
Jones, Geo. S	Covington . . .	R. D	Spining, Alva	Wallace	R. D
Mock, J. W	Covington . . .	R. D	Young, B. F	Veedersburg . .	R. D
Moore, Patrick B . . .	Kingman	R. 10	_____, Zinn	Covington . . .	P. M.

Regular, 25; Eclectic, 2; Physio-Medical, 1.

Franklin County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Anness, W. R. . . .	Bath	R. 3	McGuire, Wm. W. . .	Metamora . . .	R. 10
Berry, Wm. H. . . .	Brookville . . .	R. D	Morgan, John W. . .	Springfield . .	R. D
Buckingham, G. B. .	Brookville . . .	R. D	McElwee, Harry . .	Bath	R. 6
Bertenshaw, T. J. .	Drewersburg . .	R. 10	Maris, Thos. E. . . .	Laurel	R. D
Best, Wm. P.	Mt. Carmel . . .	R. D	Owens, Robert	Cedar Grove . .	R. D
Beall, C. M.	Clarksburg . . .	R. D	QUICK, JOHN H. . .	Brookville . . .	R. 10
Conner, T. H.	Metamora	R. D	Reed, L. D.	Fairfield	R. D
Carter, Calvin . . .	Brookville . . .	R. D	Rayburn, I. W. . . .	Andersonville .	R. D
Fedderman, Chas . .	Brookville . . .	R. D	Sohum, Charles . . .	St. Peter	R. 10
Gregory, Henry . . .	Laurel	R. 10	Spillman, E. J. . . .	Andersonville .	R. D
Garrigus, I. D. . . .	Cedar Grove . . .	R. D	Simmons, Ekma . . .	Blooming Grove .	R. 10
Hendricks, ——— . .	Laurel	R. D	Starr, J. P.	Blooming Grove .	R. 10
Linegar, D. B. . . .	Whitcomb	E. 10	Squires, Geo. E. . . .	Brookville . . .	E. D
Lewis, Robert	Mt. Carmel . . .	R. D	Stoddard, Solomon P	Brookville . . .	E. D
Mann, E. B.	Oldenburgh . . .	R. D	Smith, A. J.	Metamora	E. D

Regular, 25, Eclectic, 5.

Fulton County.

Bailey, A. L.	Akron	E. 10	Loring, C. J.	Rochester	R. D
Brown, Angus	Rochester	H. 3	Metzler, J. B.	Rochester	N. R. 10
Bitters, F. P.	Rochester	R. D	Morris, J. M.	Fulton	R. 10
Clymer, N. J.	Bloomingsburg .	E. D	Moore, J. W.	Marshalland . .	R. D
Dawson, B. F.	Kewanna	R. D	Overmyer, B. F. . . .	Leiter's Ford . .	R. 3
Doke, J. T.	Tiosa	R. 3	Rannells, J. N. . . .	Rochester	E. D
Fish, S. R.	Bloomingsburg .	E. 10	Rhodes, E. E.	Rochester	R. 3
Gould, Vernon	Rochester	R. D	Robbins, A. N.	Rochester	R. D
Gould, C. E.	Rochester	R. D	Richards, John . . .	Blue Grass . . .	N. R. 3
HARTER, C. F.	Akron	R. D	Shaffer, W. S.	Rochester	E. D
Hector, C.	Rochester	E. D	Shields, A. M.	Rochester	R. D
Hill, Wm	Rochester	E. D	Thompson, A. R. . .	Kewanna	N. R. 10
Howell, J. Q.	Kewanna	E. 10	Terry, C. C.	Akron	R. D
Irons, J. W.	Rochester	H. 10	Wilson, W. L.	Rochester	R. D
Johnston, A.	Akron	R. 3			

Regular, 16; Eclectic, 8; Homeopathic, 2; not reported, 3.

Gibson County.

Burton, A. R.	Princeton	R. D	Montgomery, Thos. J.	Owensville	R. D
Burton, Hiram	Somerville	R. 10	Marchand, Victor . .	Haubstadt	R. D
Ballard, John	Haubstadt	R. D	Moore, Robert	Somerville	R. D
Blair, W. W.	Princeton	R. D	Mason, Robert S. . .	Somerville	R. D
Blair, Frank	Princeton	R. D	Mason, Geo. C.	Oakland City . .	R. D
Brown, Thomas M. . .	Oakland City . .	R. D	McGowan, J. W. . . .	Oakland City . .	R. D
Benson, R. A.	Buckskin	R. D	McGowan, W. J. . . .	Oakland City . .	R. D
Beeler, Elmer E. . . .	Princeton	E. D	McCool, W. E.	Oakland City . .	R. D
Beersford, Geo. B. . .	Owensville	E. D	Nelson, Frank	Hazleton	E. 3
Clark, John I.	Owensville	R. 3	Null, Calvin L.	Oakland City . .	R. D
Duncan, W. B.	Patoka	E. 3	Patten, James C. . . .	Francisco	R. D
Davis, Oscar F. . . .	Patoka	R. D	Powell, D. G.	Princeton	R. D
DORSEY, G. L.	Princeton	R. D	Runcie, John W. . . .	Ft. Branch	R. D
Eads, E. E.	Oakland City . .	E. D	Reavis, Daniel P. . .	Francisco	R. 3
French, W. W.	Ft. Branch	R. D	Richie, L. B.	Buckskin	R. 10
Falley, Chas. F. . . .	Patoka	R. D	Rickets, H. R.	Hazleton	R. 10
Gudgel, J. F.	Hazleton	R. D	Robinson, J. L. . . .	Hazleton	R. D
Genung, Wm. R. . . .	Ft. Branch	R. D	Strickland, Geo . . .	Francisco	R. D
Hudson, Oliver L. . .	Princeton	H. 10	Shelton, J. W.	Somerville	R. 10
Hopkins, Jos. N. . . .	Ft. Branch	R. D	Shoptaugh, S. H. . .	Princeton	R. D
Hopkins, Wm. G. . . .	Ft. Branch	R. D	Stewart, Wm. H. . . .	Oakland City . .	R. D
Ireland, John M. . . .	Francisco	R. D	Tarr	Wabash Tp. . . .	10
Kidd, Wm. G.	Princeton	R. D	Thomas, Geo. A. . . .	Oakland City . .	R. D
Kendle, Geo. C. . . .	Princeton	R. D	Williams, John M. . .	Owensville	E. D
Maxam, Frank H. . . .	Princeton	R. D	Williamson, W. T. . .	Ft. Branch	E. D
Munford, Samuel E. .	Princeton	R. D	Woodruff, A. C. . . .	Oakland City . .	R. D
Malone, John A. . . .	Princeton	R. 10			

Regular, 44; Eclectic, 7; Homeopathic, 1; not reported, 1.

Grant County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Adkins, J. C.	Marion	R. D	Knight, John C.	Jonesboro	R. D
Arnold, O. C.	Marion	P.-M. D	Kelsey, J. S.	Converse	R. D
Armstrong, J.	Marion	P.-M. D	Lomax, Wm	Marion	R. D
Barnes, Robt. A.	Marion	P.-M. D	Lord, J. Levi	Marion	R. 10
Barnes, Elnor V.	Marion	P.-M. D	Ludman, Benj. F.	Marion	R. D
Barnes, Wm. C.	Marion	R. D	LYTLE, J. B.	Marion	R. D
Bordon, Chas. B.	Marion	R. D	Langston, Edgar	Point Isabel	P.-M. 3
Corey, Lewis J.	Van Buren	R. D	Litzenberger, —	Converse	R. D
Corey, L. V.	Van Buren	R. D	Landess, Geo. A.	Van Buren	R. D
Cotton, C. C.	Point Isabel	R. D	Mock, Jas. F.	Marion	P.-M. D
Conwell, L. V.	Van Buren	R. D	Munsee, Lola.	Marion	P.-M. D
Conley, Dr.	Gas City	N. R.	Moore, S. W.	Marion	E. D
Crumm, John W.	Marion	R. D	Moore, Allen	Fairmount	P.-M. D. 10
Curey, Isaac	Marion	P.-M. D	Moore, C. V.	Fairmount	R. D
Comb, A. H.	Marion	R. D	McKinney, Geo. W.	Jonesboro	R. D
Daniels, Geo. W.	Sweetser	R. D	Marlow, A. F.	Fairmount	R. D
Davis, S. H.	West Marion	R. D	Manorling, N. H.	Rigdon	R. D
Eckhart, Chas. H.	Marion	R. D	Molder, Sam'l M.	Fairmount	R. D
Ebert, A. R.	Marion	R. D	Patterson, J. W.	Fairmount	R. D
Goodin, —	Gas City	N. R.	Pugh, John W.	Upland	R. D
Flynn, Wm.	Marion	R. D	Pugh, Jefferson	Sweetser	R. D
Forrest, John H.	Marion	R. D	Ross, Justin	Marion	R. D
Fausier, D. M.	Marion	R. D	Rossner, Wm. S.	Point Isabel	P.-M. D
Francis, Walter R.	Marion	R. D	Shiveley, Wm	Marion	R. D
Ftfe, C. H.	Jalapa	P.-M. D	Snodgrass, D. B.	Marion	P.-M. D
Hollis, Samuel	Upland	R. D	Snodgrass, M. J.	Marion	P.-M. D
Hollis, Ella A.	Upland	R. D	Stephens, Ida.	Marion	P.-M. D
Henley, Alphas	Fairmount	R. D	Stewart, Jos. S.	Marion	R. D
Haines, N. P.	Sims	P.-M. D	Stephens, A. B.	Swayzee	P.-M. D
Horn, Sam'l S.	Jonesboro	R. D	Stout, O. L.	Upland	R. D
Hamilton, A. A.	Marion	R. D	Seal, I. M.	Hackelman	R. D
Hubbard, W. H.	Marion	R. D	Thomas, H. A.	Marion	P.-M. D
Hanmore, John J.	Landis	R. D	Vota, R. A.	Marion	P.-M. D
Hough, John W.	Marion	P.-M. D	Vance, —	Gas City	N. R.
Hsines, H. C.	Herbat	P.-M. D	Williams, Lewis	Marion	R. D
Johnson, T. W.	Marion	R. D	Williams, D. A.	West Marion	E. D
Jones, Enoch P.	Marion	R. D	Williams, P. E.	Sweetser	R. D
Jones, Chas. R.	Jonesboro	E. D	Wilson, Olive.	Fairmount	R. D
James C. L.	Farville	P.-M. D	Wall, M. M.	Marion	H. D
Kimball, T. C.	Marion	R. D	Webster, E. C.	Marion	E. D
Kimball, Glen D.	Marion	R. D	Whitson, Eli M.	Jonesboro	R. D
Kimball, A. D.	Marion	R. D	Whorton, Wm. L.	N. Cumberland	R. D
Kersey, Jas. R.	Weaver	P.-M. D	Walsh, Frank	Marion	R. D

Regular, 54; Eclectic, 6; Homeopathic, 1; Physio-Medical, 22; not reported, 3.

Greene County.

Asbury, W. H. H.	Jasonville	R. D	Jackson, E. J.	Linton	R. 3
Acton, Wm. G.	Koleen	N. R. 10	Lowder, H. R.	Bloomfield	R. D
Aydolotte, Thomas	Lyons	R. 3	Marshall, Alfred F.	Jasonville	R. 3
Burke, Wm. H.	Scotland	R. D	Mulane, Joseph	Lyons	R. 3
Burge, Nicholas C.	Park	N. R. 10	Minich, James	Worthington	R. D
Bridwell, Lafayette	Owensburg	R. 3	McIntosh, J. P.	Newark	E. 3
Cook, Peter M.	Solsberry	R. D	McCabe, Henry H.	Worthington	E. D
Cravens, E. R.	Marco	R. D	Newman, Wm. R.	Linton	E. 10
Cravens, Samuel C.	Bloomfield	R. D	O'Neal, Wm. A.	Worthington	R. 10
Clay, Hiram	Worthington	E. D	Squires, W. B.	Worthington	E. D
Durment, Chas. R.	Newberry	R. D	Sherwood, Elmer T.	Linton	R. D
Edwards, Chas. H.	Lyons	R. D	Selfridge, —	Worthington	R. D
Gray, John	Bloomfield	R. D	Sherwood, H. I.	Linton	R. D
Gray, E. E.	Bloomfield	R. D	SHERWOOD, E. M.	Newberry	R. D
Gray, George B.	Worthington	R. D	Talbott, James	Marco	R. D
Gray, Simeon	Worthington	R. 3	Wheeler, Thomas	Bloomfield	R. D
Greene, Wm. L.	Worthington	E. D	Yenne, Chas.	Owensburg	R. D
Harrab, John M.	Switz City	R. D	Young, Jacob	Newark	R. D
Hannon, John W.	Scotland	R. D	Cravens, W. R.	Bloomfield	R. D
Herold Henry	Owensburg	R. 10			

Regular, 30; Eclectic, 6; not reported, 2.

Hamilton County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Axline, J. A.	Noblesville.	R. D	Miese, A.	Noblesville.	R. D
Aldred, John A.	Hortonville.	R. D	Mellikan, H. W.	Sheridan.	P-M. D
Booth, A. D.	Noblesville.	R. D	McMurtry, T. J.	Boxleytown.	R. D
Benson, J. L.	Noblesville.	R. D	McFetridge, L. C.	Atlanta.	R. D
Baker, J. J.	Westfield.	P-M. D	McNutt, W. Young.	?	R. D
Cook, C. W.	Carmel.	P-M. D	Moore, T.	Omega.	R. D
Coffin, D. F.	Westfield.	P-M. 10	Mendenhall, C. W.	Carmel.	R. D
Cropper, E. A.	Sheridan.	R. D	Newby, J. C.	Sheridan.	R. D
Davenport, L. W.	Sheridan.	R. D	Pettijohn, J. B.	Westfield.	R. 10
Dove, S. C.	Westfield.	R. D	Pettijohn, O. B.	Noblesville.	R. D
Driver, J. C.	Atlanta.	R. D	Parr, J. N.	Jolietville.	R. D
Davenport, J. H. C.	Sheridan.	R. 9	Rhodes, Anna.	Atlanta.	R. 10
Faucher, J. W.	Sheridan.	R. D	Smith, H. B.	Olio.	R. D
Fodrea, Zeri H.	Westfield.	R. D	Smith, T. J.	Noblesville.	R. D
Graham, W. B.	Noblesville.	R. D	Stout, H. H.	Cicero.	R. D
Gray, J. M.	Noblesville.	R. D	Ramer, B.	Eagletown.	R. D
Haworth, M. C.	Noblesville.	R. D	Snowden, Jesse.	Strawtown.	R. D
Harold, N. W.	Carmel.	R. D	Smith, D.	Noblesville.	H. 10
Herr, H. L.	Westfield.	R. D	Shelburn, W. T.	Jolietville.	R. D
Heath, J. P.	Fisher's Station.	R. D	Penn, R. L.	Deming.	R. D
Hershey, K. C.	Carmel.	R. D	Tucker, A. R.	Cicero.	R. D
Herold, I. S.	Westfield.	P-M. 10	Teter, G. W.	Sheridan.	R. D
Kitchel, J. S.	Noblesville.	H. 10	White, T. A.	Noblesville.	R. D
LOEHR, E. C.	Noblesville.	R. D	Whitsell, P. P.	Clarksville.	R. D
Lyle, A. W. T.	Fisher's Station.	R. D	Warford, F. M.	Cicero.	R. D
Lamb, Ernoch.	Fortville.	R. D	Wilson, W. L.	Clarksville.	E. D
Murphy, James M.	Arcadia.	R. D	Wheeler, M. M.	Noblesville.	P-M. D

Regular, 43; Eclectic, 1; Homeopathic, 2; Physio-Medical, 6; not reported, 2.

Hancock County.

Adams, M. M.	Greenfield.	R. D	Hannah, R. L.	Warrington.	R. D
Andrews, J. C.	Westland.	R. 10	Hammer, N. L.	Wilkerson.	P-M. D
Ayer, A. D.	Charlottsville.	E. D	Hervey, F. F.	Fortville.	R. D
BOOTS, S. S.	Greenfield.	E. D	Hervey, T. P.	McCordsville.	R. D
Bruner, C. K.	Greenfield.	R. D	Hervey, S. W.	McCordsville.	R. D
Bruner, Mary L.	Greenfield.	R. D	Julian, J. W.	Wilkerson.	P-M. D
Black, J. P.	Greenfield.	R. 9	Justice, W. A.	Eden.	R. D
Buchell, Jacob.	New Palestine.	R. 10	Justice, J. H.	Maxwell.	R. D
Bell, John S.	Philadelphia.	10	King, W. R.	Greenfield.	R. 10
Cory, John S.	McCordsville.	R. 10	Kirkhoff, C. H.	New Palestine.	R. D
Oummins, Jas. L.	Mt. Comfort.	P-M. D	Larimer, J. W.	Carrolton.	R. D
Cox, W. B.	Charlottsville.	E. 10	Martin, S. M.	Greenfield.	R. D
Cook, B. H.	Wilkerson.	R. D	Neir, O. M.	New Palestine.	R. D
Comstock, J. A.	Greenfield.	R. D	Pratt, C. C.	Willow Branch.	R. D
Dailey, G. W.	Charlottsville.	E. 9	Ramsey, R. B.	Greenfield.	E. D
Ely, J. M.	New Palestine.	R. D	Stuart, A. H.	Fortville.	R. D
Ely, L. G.	New Palestine.	R. D	Stuart, J. G.	Fortville.	R. D
Howard, N. P., Jr.	Greenfield.	R. D	Selman, J. G.	Greenfield.	R. D
Howard, N. P., Sr.	Greenfield.	R. D	Troy, S. A.	Milner's Corner.	R. D

Regular, 29; Eclectic, 5; Physio-Medical, 3; not reported, 1.

Harrison County.

Baxter, John.	Mauckport.	R. D	Hurst, S. H.	Laconia.	R. D
Baston, C. H.	Bradford.	R. D	Jones, A. M.	Corydon.	R. D
Clark, J. C.	Corydon.	R. D	LaFollett, W. P.	Mott's Station.	R. 10
Daniels, Wm.	Corydon.	R. D	Lawson, John.	Corydon.	R. D
Davis, H. H.	New Middleton.	R. D	Marshall, D. J.	New Middleton.	R. D
Davis, W. H.	Crandall.	R. D	Martin, Geo.	Corydon.	R. D
Dean, H. K.	Central.	R. 10	Moore, Wm.	Convenience.	R. D
Denbo, Wm.	Mauckport.	R. 10	Neely, Isaac.	Corydon.	R. D
Forbis, B. F.	Laconia.	R. D	Reader, Wm.	Amsterdam.	R. D
Finley, J. H.	Palmyra.	R. D	Siegler, R. R.	Ramey.	R. D
Fouts, Clint.	Corydon Junction.	R. 10	Swearns, J. H.	Moberly.	R. D
Fouts, D. C.	Lanesville.	R. D	Wedell, J. C.	Elizabeth.	R. D
FUNK, Z. T.	Corydon.	R. D	Welfe, L. C.	Mauckport.	R. D
Hays, D. W.	Valley City.	R. D	Wolf, Z. C.	Lanesville.	R. D
Hopper, Isaac.	DePauw.	P-M. D	Wolpert, W. I.	Elizabeth.	R. D
Horne, J. C.	Lanesville.	R. D	Zenor, Jerry.	New Middleton.	R. 10

Regular, 31; Physio-Medical, 1.

Hendricks County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Adams, Thomas J . . .	North Salem . . .	R. D	Hoadley, W. J . . .	Danville . . .	R. D
Baldwin, I. J . . .	Brownsburg . . .	E. D	Havenridge, A . . .	Stilesville . . .	R. D
Bartholomew, Bradley . . .	Danville . . .	R. D	Johnson, Oscar B . . .	Lizton . . .	R. D
Barker, Joel T . . .	Danville . . .	R. D	Jesse, Maria A . . .	Friendswood . . .	R. D
Brill, James H . . .	Pittsboro . . .	R. D	Kennedy, Leroy H . . .	Danville . . .	R. D
Brent, I. N . . .	Pittsboro . . .	R. D	Lawson, Wilson T . . .	Danville . . .	R. D
Brooks, M. W . . .	Hazlewood . . .	R. 3	Marsh, John L . . .	Brownsburg . . .	E. D
Carter, Amos . . .	Plainfield . . .	R. D	Morgan, Abram . . .	Cartersburg . . .	E. D
Cloud, C. F. C . . .	Pittsboro . . .	R. 10	Martin, Simeon . . .	North Salem . . .	R. D
Davidson, Albert W . . .	Brownsburg . . .	R. D	Osborn, John A . . .	New Winchester . . .	R. D
Depew, Marshall F . . .	Danville . . .	R. D	Parker, M. G . . .	Danville . . .	R. D
Dryden, Thomas F . . .	Clayton . . .	R. D	Robbins, William . . .	North Salem . . .	R. D
FARABEE, C. E . . .	Danville . . .	R. D	Reagan, Jesse . . .	Plainfield . . .	R. D
French, John S . . .	Pittsboro . . .	R. D	Ragan, John S . . .	Avon . . .	R. D
Green, J. N . . .	Stilesville . . .	R. D	Summers, Harvey C . . .	Amo . . .	R. D
Grimes, W. F . . .	Coatesville . . .	R. 3	Strong, John T . . .	Plainfield . . .	R. D
Grimes, J. B . . .	North Salem . . .	R. D	Strong, Asa M . . .	Bellville . . .	R. D
Gilbert, A. K . . .	Clayton . . .	R. D	Sanders, Louis A . . .	Lizton . . .	R. D
Harvey, William D . . .	Plainfield . . .	R. D	Seaton, Grafton W . . .	Cartersburg . . .	R. D
Harvey, William F . . .	Rainstown . . .	R. D	White, Charles A . . .	Danville . . .	R. D
Hunt, Stephen . . .	Coatesville . . .	R. D	White, Wm. H . . .	Amo . . .	R. D
Huron, Frank H . . .	Danville . . .	H. D			

Regular, 39; Eclectic, 3; Homeopathic, 1.

Henry County.

Bailey, G. D . . .	Spiceland . . .	R. D	McSherley, J. L . . .	Sulphur Springs . . .	R. D
Bailey, Rachel S . . .	Spiceland . . .	R. D	Mendenhall, E. T . . .	New Castle . . .	R. D
Barrett, Omar H . . .	Knightstown . . .	R. D	Moore, N. Lorella . . .	New Castle . . .	H. D
Bartlett, A. C . . .	New Castle . . .	R. D	Newhouse, John T . . .	Sulphur Sp'gs . . .	P-M. D
Bartlett, C. T . . .	Lewisville . . .	R. D	Newby, Zimri . . .	Greensboro . . .	R. 10
Benedict, H . . .	Springport . . .	R. 3	Newby, Nathan . . .	Spiceland . . .	P-M. D
Bond, C. W . . .	Cadiz . . .	R. 10	Norviel, R. D . . .	Mount Summit . . .	E. D
Boor, W. A . . .	New Castle . . .	R. D	Oalden, W. C . . .	Kennard . . .	R. 10
Boor, W. F . . .	New Castle . . .	R. D	Painter, Perry . . .	Middletown . . .	P-M. D
BURKE, G. W . . .	New Castle . . .	R. D	Pendleton, C. B . . .	Mechanics'gP . . .	M. D
Clapper, D . . .	Moorland . . .	H. D	Pickering, S . . .	New Lisbon . . .	R. D
Cochran, James . . .	Spiceland . . .	R. D	Post, B. O . . .	Sulphur Spr'gs . . .	R. D
Coffin, Oliver S . . .	Lewisville . . .	E. D	Rawlins, F. J. P . . .	Elizabeth City . . .	R. D
Cress, J. B . . .	Knightstown . . .	R. D	Rawlings, John U . . .	Elizabeth City . . .	R. 3
Crouse, H. M . . .	Knightstown . . .	E. D	Rea, John . . .	New Castle . . .	R. D
Drake, F. J . . .	Knightstown . . .	R. D	Rodecap, Geo. W . . .	Middletown . . .	H. D
Eskew, W. C . . .	New Castle . . .	R. D	Rogers, Leroy . . .	Kennard . . .	E. D
Estabrook, L. W . . .	Springport . . .	R. D	Rogers, S. G . . .	Mooreland . . .	E. D
Ferris, E. S . . .	Cadiz . . .	R. D	Smith, Mary J . . .	Greensboro . . .	P-M. D
Ferris, S . . .	New Castle . . .	R. 10	Smith, R. A . . .	Greensboro . . .	P-M. D
Garrett, O. H . . .	Cadiz . . .	R. D	Stafford, Charles A . . .	New Castle . . .	P-M. D
Griffis, Robert . . .	Middletown . . .	R. D	Stafford, Daniel H . . .	New Castle . . .	P-M. D
Gronendyke, O. J . . .	New Castle . . .	R. D	Stafford, J. A . . .	Millville . . .	P-M. D
Gronendyke, T. W . . .	Lewisville . . .	R. 3	Stafford, Horace . . .	Straughn's St. P . . .	M. D
Guyer, O. K . . .	Lewisville . . .	R. D	Thornburgh, Frank L . . .	Middletown . . .	R. D
Hardesty, J. C . . .	Millville . . .	R. D	Waters, S. C . . .	Middletown . . .	R. D
Hess, F. P . . .	Cadiz . . .	R. D	Weaver, J. C . . .	New Castle . . .	P-M. D
Hollinger, I. N . . .	Blountsville . . .	R. 3	Weaver, John . . .	Knightstown . . .	R. 10
Holloway, Lizzie E . . .	Spiceland . . .	H. D	Weeks, Elizabeth J . . .	Mechan'burg . . .	P-M. D
Holloway, O. E . . .	Knightstown . . .	R. D	Weeks, Joseph . . .	Mechan'burg . . .	P-M. D
Hastings, A. N . . .	Kennard . . .	H. D	Welsh, J. H . . .	Middletown . . .	R. D
Johnson, E. M . . .	Knightstown . . .	R. D	White, J. A . . .	Dunreith . . .	R. D
Kirk, E. E . . .	Spiceland . . .	R. D	Williams, H. D . . .	New Castle . . .	P-M. D
Kissell, William . . .	New Castle . . .	R. 10	Williamson, Harry . . .	Knightstown . . .	R. D
McGavran, W. B . . .	Knightstown . . .	R. D	Winston, L. V . . .	Knightstown . . .	R. D
McKillip, J. H . . .	Snyder . . .	R. 10	Yockey, D. H . . .	Blountsville . . .	R. 3

Regular, 50; Homeopathic, 5; Eclectic, 4; Physio-Medical, 14.

Howard County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Armstrong, E. A.	Kokomo.	R. D	Moore, J. B.	Kokomo	R. D
Barker, T. B.	Kokomo	H. D	McClurg, Wm. H.	Kokomo	R. D
Bates, A. J.	Kokomo.	R. D	Newlin, S.	Newlandon.	E. D
Berst, J. H.	Kokomo.	R. D	Oiler, L.	Kokomo	R. D
Bagwell, L. A.	Jerome.	R. D	Rice, E. C.	Oakford.	E. D
Conner, L.	Phlox.	R. 3	Ross, J. H.	Kokomo	R. D
Cooper, Wm.	Kekomo.	E. D	Ross, R. H.	Kokomo	R. D
Cooper, I. A.	Kokomo.	E. D	SMITH, R. H.	Kokomo	R. D
Garr, J. O.	Kokomo.	R. D	Scott, Wm.	Kokomo	R. D
Hull, W. H.	Center.	R. D	Scott, G. D.	Greentown	R. D
Kern, T.	Kokomo	R. D	Sawyer, E. W.	Kokomo	H. D
Kern, L.	Kokomo	R. D	Thorne, J. C. F.	Kokomo	R. D
Kirkpatrick, J. B.	Kokomo	R. D	Wane, C. W.	West Liberty.	R. D
Kemp, G. W.	Russiaville.	R. 3	Wert, J. J.	Kokomo	R. D
Moulder, J. M.	Kokomo	R. D	Wilson, R. L.	Kokomo	R. D
Miller, L. C.	Alto.	R. D	Worley, C. A.	Kappa.	R. 10
Murray, S. T.	Greentown	R. 10	Wright, J. W.	Kokomo	R. D

Regular, 27; Eclectic, 5; Homeopathic, 2.

Huntington County.

Beck, Wm. R.	Bippus	R. D	Howland, M.	Majenica	R. D
Beck, George	Huntington.	R. D	Kemp, Jos. W.	Roanoke	R. D
Bonifield, W. D.	Warren.	R. D	Kuntz, Sylvester.	Roanoke	R. D
Burns, A. M.	Bippus	R. D	Kilander, Wm. J.	Markle	R. D
Beaver, H. M.	Huntington	R. D	Lyons, Ira E.	Huntington	R. D
Bucher, J. C.	Andrews	R. D	Lyons, Wm. B.	Huntington	R. D
Crandle, Thos.	Majenica.	E. D	Layman, Daniel S.	Huntington	R. D
Cory, H. W.	Huntington	H. D	Layman, Emery H.	Huntington	R. D
Carson, W. F.	Roanoke	R. D	Mitchell, Samuel P.	Mt. Etna.	R. D
Cashee, W. C.	Huntington	R. D	Mackey, James L.	Warren.	H. D
Chenowith, Geo. F.	Mt. Etna.	R. D	McLin, Geo. H.	Huntington	H. D
Derbyshire, S. J.	Andrews	R. D	Palmer, E. W.	Warren	R. D
Derbyshire, Luella.	Andrews	R. D	Scott, N. W.	Huntington	R. D
Edgington, B. F.	Plum Tree.	P. M. D	Shaffer, A. H.	Huntington	R. D
Fint, D. Fred.	Huntington	R. D	Scheffer, W. L.	Huntington	R. D
Fry, Chas. W.	Bracken	R. D	Severance, Lagrange.	Huntington	R. D
Fisher, E. S.	Markle	R. D	Searler, Jos. D.	Huntington	R. 10
Fish, W. S.	Hoboken	E. D	Williams, O. B.	Andrews	R. 10
Frazier, F. M.	Warren	R. D	Wallace, Leroy S.	Hoboken	R. D
Good, Chas. H.	Warren.	R. D	Wright, Chas. I.	Huntington	R. D
Grayston, F. S. C.	Huntington	R. D	WRIGHT, KRVIN	Huntington	R. D
Grayston, B. H. B.	Huntington	R. D	Wall, Francis M.	Warren.	R. D
Grayston, Chas. E.	Huntington	R. D	Yingling, Daniel	Huntington	E. D
Gemmill, Henry C.	Markle	R. D	Young, Edward L.	Pl's'nt Plain.	N. R. 10

Regular, 38; Eclectic, 3; Homeopathic, 3; Physio-Medical, 1; not reported, 1.

Jackson County.

Bain, W. C. A.	Brownstown	R. 10	Monroe, V. H.	Seymour	R. 10
Brooks, W.	Reddington	N. R. 10	Osterman, A. G.	Dudleytown	R. D
Barnes, George O.	Courtland	R. D	Orvis, George Q.	Seymour	R. D
Bard, Thos. S.	Crothersville.	R. 10	Paxton, James C.	Medora	R. D
Cummings, H. A.	Mooney	R. 3	Patriek, Chas. E.	Seymour	R. D
CUMMINGS, D. J.	Houston	R. 3	Reed, E. C.	Ewing	R. 10
Charlton, Sam'l H.	Seymour	R. 10	Richards, Thos. J.	Mooney P. O.	R. 10
Oasey, Wm. M.	Seymour	R. D	Ruddick, L.	Seymour	R. D
Chute, George H.	Freestown	P. M. D	Shields, Jas. M.	Seymour	R. D
Converse, Elmer A.	Tampico	E. D	Shields, J. T.	Seymour	R. 10
Ewing, F. M.	Vallonia	R. 10	Shipman, N. N.	Seymour	R. D
Gerrish, M. F.	Seymour	R. D	Shoemaker, E.	Seymour	N. R. 10
Galbraith, T. S.	Seymour	H. D	Stillwell, J. A.	Brownstown	R. D
Grassle, Geo. G.	Seymour	H. D	Tucker, W. W.	Tampico	R. D
Green, Jas. H.	Seymour	R. 10	Tinch, E. T.	Freestown.	R. D
Gibson, George W.	Houston	R. 10	Veazy, A. M.	Medora	R. D
Green, Wm. O.	Dudleytown	R. 10	Veazy, T. R.	Seymour	R. D
Hunter, Charles A.	Reddington	P. M. D	Wells, Jas. C.	Mooney P. O.	R. D
Kyte, H. R.	Courtland	P. M. D	Whitehead, Wm. E.	Brownstown	R. D
May, Albert	Crothersville	R. D	Wilson, M. V.	Medora.	R. 10
McCormick, L. B.	Crothersville	R. D	Warner, W. H.	Crothersville	R. D
McMillan, J. P.	Medora	R. 10	Wilson, C. L.	Ewing	R. D
Manual, G.	Freestown	R. 10			

Regular, 38; Eclectic, 1; Homeopathic, 1; Physio-Medical, 3; not reported, 2.

Jasper County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Alter, M. B.	Rensselaer	R. 3	Patton, D. H.	Remington	R. D
Demming, J. C.	Rensselaer	R. 10	Porter, J. W.	Rensselaer	Steam 10
Hartsell, W. W.	Rensselaer	H. D	Ramsey, John P. . . .	Remington	R. D
Jones, H. G.	Kniman	R. D	Reigle, M. W.	Remington	P-M. 10
London, H.	Remington	R. D	Stockwell, Willard . .	Wheatfield	P-M. 10
LOUGHRIDGE, V. E. . .	Rensselaer	R. D	Washburn, I. B. . . .	Rensselaer	R. D
Loughridge, J. H. . .	Rensselaer	R. 3			

Regular, 10; Homeopathic, 1; Physio-Medical, 2.

Jay County.

Arthur, C. S.	Portland	R. 3	Munsey, S. E.	New Mt. Pleasant R. 10	
Anderson, Jas. M. . .	Dunkirk	R. 10	McKinsey, W. M. . . .	Dunkirk	P-M. D
Brown, H. V.	Portland	R. D	Mason, Samuel	Pennville	R. D
Blackledge, A. J. . .	Pennville	E. D	Owen, C. C.	Salamonia	R. D
Blackledge, L. M. . .	Pennville	E. D	Poling, S. K.	Portland	E. D
Clevenger, B. F. . . .	Red Key	R. D	Ross, John G.	Portland	E. D
Connor, N. F.	Red Key	E. D	Rarick, I. N.	Bluff Point	P-M. D
Dickes, John T. . . .	Portland	R. D	Ralston, Augustus . .	New Corydon	R. D
Davis, R. P.	Portland	R. D	Skidmore, C. E. . . .	Portland	R. D
Duff, V. E.	Dunkirk	R. D	Sims, I. G.	Portland	R. D
Fertich, G. W.	Dunkirk	R. D	Shepherd, Thos. S. . .	Portland	R. 10
Garber, Jonathan B. .	Dunkirk	R. D	Shepherd, Geo. W. . .	Red Key	R. 10
Glentzer, M. A. . . .	Briant	E. 10	Sare, Ira	Red Key	E. 10
Gillum, S. A. D. . . .	Portland	R. D	Stiers, F. R.	Red Key	E. D
HALL, JOHN W.	Portland	R. D	Skinner, D. T.	Salamonia	E. D
Horn, W. C.	Pennville	R. D	Stanton, D. S.	Portland	R. 10
Hutchison, Jas. A. . .	Salamonia	R. D	Sanders, C. B.	Pennville	P-M. D
Jay, M. F.	Portland	R. D	Selvey, S. S.	Dunkirk	R. D
Kidder, Jas. F. . . .	New Mt. Pleasant R. 10		Thomas, E. Rosa	Red Key	P-M. D
Kinsey, D. S.	Portland	R. 3	Vail, I. M.	Portland	E. D
Mackey, C. A.	Portland	R. D	White, T. C.	Powers	R. 10
Morhouse, Jno. A. . .	Portland	P-M. D	White, J. K.	Pennville	R. D
Minks, F. W.	Portland	H. 3	Young, Frank	Dunkirk	E. D
Miles, J. T.	Briant	R. D			

Regular, 30; Eclectic, 11; Homeopathic, 1; Physio-Medical, 5.

Jefferson County.

Bringle, J. S.	Hanover	R. 10	Lewis, Jas. R.	Madison	R. D
Burdsal, Chas. A. . .	Lancaster	R. 3	Lewis, Geo. C.	Kent	R. D
Bear, Lowry H.	Brooksaburk	R. D	Lewis, J. F.	Dupont	R. D
Christie, J. H.	Canaan	R. D	Lewis, Geo. B.	Dupont	R. D
Cooperider, J.	Madison	R. D	Lewis, Samuel B. . . .	Canaan	R. D
Cogley, T. J.	Madison	R. D	Lewis, V. Mollie	Canaan	R. D
Chasteen, H. W. . . .	Big Creek	R. D	Matthews, J. H.	Madison	R. D
Cornett, W. F. S. . . .	Madison	R. D	Muret, J. A.	Madison	R. D
Copeland, Chas. C. . .	Madison	R. D	McCarty, W. W.	Canaan	R. D
Cohen, Morris A. . . .	Madison	R. D	McCOY, WM. A.	Madison	R. D
Davidson, Wm. R. . . .	Madison	R. D	Penn, Ben. A.	Bryantsburg	E. D
Deputy, Sol. R.	Kent	R. D	Rawlings, J. V.	Wirt	R. D
Dixon, Z. C.	Deputy		Reynolds, J. H.	Wirt	R. D
Flanders, J. W.	Dupont	R. D	Ryker, Chas.	Manville	R. D
Ford, S. M.	Madison	R. D	Sanderson, Thos. . . .	Kent	R. D
Forsher, T. W.	Madison	R. D	Smith, Edwin M.	Madison	N. R. 10
Frueman, Wm.	Madison	R. D	Shutterly, W. R. . . .	Bryantsburg	R. D
Hewitt, Geo. W.	Madison	R. D	Swan, Tyrus E.	Hanover	E. D
Hutchings, W. D. . . .	Madison	R. D	Tevie, R. M.	Brooksaburgh	R. D
Hutchinson, Jos. B. . .	Madison	H. D	Tevie, E. R.	Brooksaburgh	R. D
Johnson, A. H.	Chilson	R. D	Townsend, S. M.	Madison	R. D
Julien, Paris	Swanville	N. R. 10	Wadsworth, Chas. . . .	Madison	R. D
Lefebvre, Jas. M. . . .	Graham	R. D			

Regular, 40; Eclectic, 1; Homeopathic, 1; not reported, 3.

Jennings County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Adams, S. D.	Brownsville	R. 10	Kendrick, N. C.	Butlerville	R. 10
Amick, C. C.	Hayden	R. D	Kyle, Jas. W.	North Vernon	R. D
Case, W. W.	Zenas	R. D	Light, A. B.	North Vernon	R. D
Corya, F. M.	Nebraska.	E. 10	Mitchell, W. J.	Vernon	R. D
Corya, P. W.	Zenas	E. D	Nighswander, M.	Hayden	R. D
Cox, J. G.	Nebraska.	R. D	Phillips, C. W.	Scipio	R. D
Ditcher, E. W.	Butlerville	R. D	Richardson, W. H.	Vernon	R. D
Fall, W. R.	North Vernon	R. D	Richardson, N.	Vernon	R. D
Firschie, B.	North Vernon	R. 10	Stemam, W. H.	North Vernon	R. D
Green, J. H.	North Vernon	R. 10	Sheppard, J. F.	Queenville	R. 10
Gaddy, O.	Paris Crossing	R. D	Tharp, Robt	Scipio	N. R. 10
Gaddy, N. D.	Lovett	R. D	Wildman, W.	San Jacinto	R. D
HICKS, BRUCE R.	North Vernon	P.-M. D			

Regular, 21; Eclectic, 2; Physio-Medical, 1; Not reported, 1.

Johnson County.

Adams, J. H.	Amity	R. 10	Kegley, John L.	Stone's Cross'g	R. 3
Adams, David	Edinburg	E. D	Lanam, J. H.	Edinburg	R. D
Beebe, James	Whiteland	R. 10	Lee, D. F.	Providence	R. D
Bland, John A.	Edinburg	R. D	Miller, A.	Whiteland	R. D
Byers, R. S.	Trafalgar	R. D	Miller, D. H.	Franklin	R. D
Burgett, D. A.	Rocklane	R. D	Middleton, J. T.	Nineveh	R. D
Covert, G. W.	Franklin	R. 3	Maze, V. B.	Needham	R. D
Carnes, Zachariah	Greenwood	R. D	Noble, Tom B.	Greenwood	R. 10
Cupp, M. F.	Edinburg	R. D	Ott, L. E.	Franklin	R. D
Donnell, T. C.	Franklin	R. D	Payne, P. W.	Franklin	R. D
Dobyns, P. K.	Whiteland	R. D	Payne, C. A.	Franklin	R. D
Davis, A. T.	Edinburg	R. 10	Province, W. M.	Providence	R. D
Farris, J. T.	Baragville	R. D	Paine, Luther	Edinburg	E. D
Fisher, Ira C.	Needham	R. D	Rush, W. P.	Edinburg	R. D
George, W. E.	Franklin	R. D	Ream, J. B.	Edinburg	R. D
Gillaspay, F. P.	Smiths Valley	R. D	Terhune, Webster	Whiteland	R. D
Hall, W. J.	Franklin	R. D	Wood, J. C.	Franklin	R. D
Hall, H. J.	Franklin	R. D	Wishard, J. M.	Greenwood	R. D
Hibbs, Irwin	Nineveh	R. 10	Wallace, B.	Franklin	R. D
Howe, K. M.	Edinburg	E. D	Willan, R. Day	Trafalgar	R. D
Henry, James	Franklin	E. D	Whitesides, L. L.	Franklin	R. D
Jones, J. T.	Franklin	R. 10	WRIGHT, A. F.	Nineveh	R. D

Regular, 39; Eclectic, 4; Homeopathic, 1.

Knox County.

Alexander, James F.	Bruceville	R. D	Keith, Ben F.	Edwardsport	R. D
Boyer, Eli	Vincennes	R. D	Kessinger, W. E.	Sandborn	R. D
Beard, Schuyler C.	Vincennes	R. D	Lytton, Jefferson	Wheatland	R. 3
Beckes, Lyman H.	Vincennes	R. D	McIntosh, A. J.	Allendale, Ill.	R. D
Ballard, Joseph H.	Vincennes	R. D	Mayfield, Geo. W.	Bruceville	R. D
Bever, John C.	Vincennes	P.-M. 3	McDowell, James M.	Bruceville	R. D
Béver, Almira C. W.	Vincennes	E. D	Merritt, J. N.	Oaktown	R. 3
Bruce, W. E.	Vincennes	E. D	McDowell, L. C.	Freelandsville	R. D
Black, Elijah C.	Wheatland	R. 3	McGanky, A. J.	Freelandsville	R. D
Benham, C. W.	Wheatland	R. D	Meyer, H. B.	Freelandsville	R. D
Barnett, John H.	Monroe City	R. D	Meek, Wm. M.	Vincennes	R. D
Cross, John F.	Vincennes	R. 3	Moore, R. G.	Vincennes	R. D
Caney, P. H.	Vincennes	R. D	Reeves, J. L.	Edwardsport	R. D
Du Kate, John S.	Monroe City	R. D	Ray, J. W.	Emison	P.-M. D
Du Kate, John B. D.	Wheatland	R. 10	SWARTZEL, J. A.	Vincennes	R. D
Davis, Royse	Decker	R. D	Smith, H. M.	Vincennes	R. D
Davenport, Wm. H.	Vincennes	R. D	Smith, Wm. F.	Vincennes	E. D
Edmonson, G. W.	Monroe City	R. D	Staley, L. B.	Bicknell	R. D
Fairhurst, O. C. C.	Vincennes	R. D	Spaulding, G. L.	Sandborn	R. D
Grigsby, W. B.	Oaktown	R. D	Shirts, Elmer	Sandborn	R. D
Harris, F. M.	Vincennes	R. D	Sparks, N. B.	Monroe City	R. 10
Hensley, J. H.	Vincennes	R. D	Sprinkle, W. B.	Oaktown	R. D
Harrison, S. L.	Vincennes	R. 3	Trout, R. E.	Oaktown	R. D
Jessup, R. B., Sr.	Vincennes	R. D	Trueblood, J. W.	Monroe City	R. 3
Jessup, R. B., Jr.	Vincennes	R. D	Van Nuys, F. B.	Evansville	R. D
Jones, W. R.	Bicknell	R. D	Von Trees, E. L.	Monroe City	R. D
Knapp, Geo.	Vincennes	R. D	Williams, J. T.	Monroe City	E. D

Regular, 47; Eclectic, 3; Homeopathic, 2; Physio-Medical, 2.

Kosciusko County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Amiss, James M.	Silver Lake	R. D	Leech, Rich V.	Oswego	R. D
Byler, Joseph M.	Warsaw	H. D	Liter, W. S.	Claypool	R. D
Bowser, John H.	Syracuse	R. D	Long, Chas. R.	Piercetown	R. D
Bash, J. M.	Warsaw	R. D	McDonald, A. C.	Warsaw	R. D
Burkett, Cal. W.	Warsaw	R. D	Moran, John W.	Etna Green	P. M. D
Burkett, Ben.	Warsaw	R. D	Miener, Henry F.	Sidney	P. M. D
Becknell, I. J.	Milford	R. D	Moro, Francis	Warsaw	E. D
Boydston, Benj. S.	Atwood	R. D	Moody, Theo. F.	Piercetown	R. D
Blair, David	Silver Lake	10	Parks, John P.	Atwood	R. D
Chandler, Joseph A.	Warsaw	R. 10	Parker, James W.	Oswego	10
Clayton, Calvin M.	Warsaw	R. 10	Pearman, Francis M.	Palestine	R. D
Cammack, Calvin M.	Milford	R. D	Potts, J. E.	Milford	R. D
Dick, Milford L.	Wooster	P. M. D	Robison, Andrew B.	Mentone	R. D
Dorsey, Allen P.	Sidney	E. D	Robison, Sarah H.	Warsaw	E. 10
Frost, R. Fred	Warsaw	E. D	Renolds, Winfield S.	Sevastapool	R. D
Gorton, Mary L. L.	Warsaw	R. D	Snodgrass, Sam'l J.	Burkett	P. M. D
Hazel, John B.	Claypool	R. D	Smyhart, Anna	Warsaw	P. M. D
Hefley, John W.	Mentone	E. D	Sherbond, Geo. W.	Silver Lake	E. D
Hathfield, Thomas J.	Piercetown	R. 10	Schoonover, Wm. S.	Warsaw	R. D
Hoover, John S.	Gravelton	R. D	Smith, James S.	Warsaw	P. M. D
Hoopingartner, J. B.	Milford	R. D	Scott, Wm	Sidney	R. 10
Hathfield, W. J.	North Webster	R. D	Shackleford, Tiffin J.	Warsaw	R. D
Hawat, Wm. F.	Packertown	R. D	Strain, Theo. F.	Silver Lake	R. 3
Hing, H. O.	Piercetown	R. D	Stockberger, E.	Mentone	R. 3
Junkin, S. B.	North Webster	R. 10	Terry, Percy E.	Silver Lake	R. 3
Johnston, E. E.	Leesburgh	R. D	Terry, Daniel E.	Silver Lake	R. 10
Johnson, A. R.	Piercetown	H. 10	Tenant, L. H.	Sidney	R. 10
Jameson, Martha E.	Warsaw	E. D	Wooley, Amos	Warsaw	R. D
Kelly, David C.	Milford	H. 10	Webber, Irvin B.	Warsaw	R. D
Keen, Levi	Milford	H. 10	Wall, James L.	Reaver Dam	P. M. D
Ketchum, G. V.	Claypool	R. D	WHITE, R. PARKS	Warsaw	R. D
Kelly, Wm. M.	Etna Green	R. D	White, W. Alvin	Clunette	R. D
Keplinger, Wm	Burkett	10	Yocum, M. G.	Mentone	E. D
Love, J. W.	Milford	10			

Regular, 41; Eclectic, 8; Homeopathic, 3; Physio-Medical, 7; not reported, 8.

Lagrange County.

Abbott, John F.	Lima	R. D	Healip, James M.	Mount Pisgah	H. 10
Abbott, Nelson	Lima	R. D	Kester, A. A.	Wolcottville	H. 10
Benham, Frank A.	Lagrange	H. D	Newnam, Harmer M.	South Milford	R. D
Broughton, Forbes H.	Wolcottville	R. D	Price, Henry B.	Woodruff	R. D
Dayton, George H.	Lima	R. D	Raby, William	Wolcottville	E. 10
Dancer, John	South Milford	R. D	Rawles, J. W.	Mongo	R. 10
DRYER, DWIGHT W.	Lagrange	R. D	Schrock, H. W.	Shipshewana	R. D
Denny, J. N.	Haw Patch	R. 3	Schrock, J. J.	Emma	R. D
Kash, Sam'l M.	Shipshewana	R. D	Short, Wm. H.	Lagrange	R. D
Engle, J. B.	Lagrange	R. 10	Short, John L.	Lagrange	R. D
Ferguson, W. A.	Brighton	R. D	Toms, Alphens	Scott	R. D
Goodrich, Charles D.	Lima	R. D	Vaughan, Iris J.	Haw Patch	R. D
Griffith, Francis P.	Lagrange	R. D	White, Edward G.	Lagrange	R. D
Grubb, W. B.	Scott	R. 10	Waddell, Chas	Lagrange	R. D
Grubb, A. A.	Mongo	R. D	Wyatt, A. Robe	Lagrange	R. D
Hughes, Wm	Lima	R. D	Youngkin, Jerome W.	Wolcottville	R. 10

Regular, 28; Eclectic, 1; Homeopathic, 3.

Lake County.

Bacon, E. R.	Lowell	R. D	Johnson, C. E.	Hammond	R. D
Blackstone, W. B.	Crown Point	R. D	Johnston, J. E.	Hammond	H. D
Bliss, M. G.	Crown Point	E. D	Jackson, L. D.	Hammond	P. M. D
Brown, C.	East Chicago	R. D	Mackey, R. C.	Hobart	E. E
BRANNON, G. D.	Crown Point	R. D	Mullen, H. E.	Hammond	R. D
Campbell, C. W.	Hammond	R. D	Merrill, W. W.	Hammond	E. D
Davis, J. E.	Lowell	R. D	Pettibone, Harvey	Crown Point	R. 3
Demars, G. E.	Hammond	R. D	Pettibone, Henry	Crown Point	R. D
Gibbs, J. C.	Crown Point	H. D	Pratt, A. J.	Crown Point	R. D
Gray, F. P.	East Chicago	R. D	Reading, H. A.	East Chicago	E. D
Groman, Charles	Brunswick	H. 10	Reading, Rose	East Chicago	E. D
Gordon, P. P.	Hobart	R. D	Schreiber, Wm	Hanover Center	E. D
Gerrish, A. A.	Lowell	R. D	Schroder, N. J.	Hobart	R. D
Higgins, John	Crown Point	R. D	Siedler, Anthony	Dyer	R. 10
Hill, J. L.	Lowell	R. D	Swartz, H. P.	Crown Point	R. 10
Iddings, H. L.	Merrillville	R. D	Wood, J. A.	Lowell	R. 10

Regular, 22; Eclectic, 6; Homeopathic, 3; Physio-Medical, 1.

Laporte County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Annis, E. L.	Laporte	R. D	Hollenbeck, B. W.	Westville	R. E
Andrew, George L.	Laporte	R. D	Keene, L. S.	Laporte	R. D
Bowman, Wm.	Wauatah	R. 10	Ludwig, J. H.	Laporte	H. D
Brown, D. T.	Michigan City	R. D	Lockyer, Douglas	Otis	R. D
Bowell, B. C.	Rolling Prairie	E. D	Martin, J. S.	Rolling Prairie	R. 10
Churchill, Lemuel	Michigan City	E. D	Martin, F. V.	Westville	R. D
Cole, E. Z.	Michigan City	H. D	Myres, J. H. W.	Laporte	R. D
Calvert, R. H.	Michigan City	R. D	Mullen, A. J.	Michigan City	R. D
Chaffee, Frank	Laporte	R. D	Newkirk, J. W.	Union Mills	R. D
CRANDALL, R. O.	Laporte	R. D	Rogers, E. A.	Laporte	R. D
Crumpacker, D.	Union Mills	R. 10	Ringle, C. A.	Laporte	R. D
Darling, N. S.	Laporte	R. D	Short, R. B.	Union Mills	R. D
Dakin, Geo. S.	Laporte	E. D	Sutherland, O. S.	Laporte	H. D
Ellsworth, H. N.	Kingsbury	R. D	Tillotson, A. G.	Michigan City	E. D
Fisher, W. H.	Wauatah	R. D	Whiting, S. C.	Laporte	R. D
Fravel, T.	Westville	R. D	Whiting, S. C.	Laporte	H. D
Fahnstock, C. S.	Laporte	H. D	Wilting, S. C.	Rolling Prairie	E. 10
Fahnstock, A. A.	Laporte	H. D	Wile, Jacob	Laporte	R. D
Gray, J. L.	Laporte	R. D	Wileox, F. T.	Laporte	R. D
Godfrey, W. R.	Michigan City	R. D	Wardner, Horace	Laporte	R. D
Holloway, A. L.	Michigan City	E. D	Wilson, Hubert	Michigan City	R. D

Regular, 31; Eclectic, 5; Homeopathic, 6.

Lawrence County.

Allen, E. F.	Fayetteville	R. 10	Larkin, John B.	Mitchell	R. D
Allen, T. J.	Mitchell	R. D	Laughlin, Charles E.	Mitchell	R. D
Andrews, John R.	River Vale	R. D	Lowder, Cyrus	Springville	E. 3
Burton, Wm. A.	Mitchell	R. D	McIntyre, E. S.	Mitchell	R. D
Burton, G. W.	Mitchell	R. D	Martin, Robert E.	Heltonville	R. D
Burton, John	Georgia	R. 10	Meadows, Jacob	Bartlettville	R. 10
Bare, A. W.	Bryantville	R. D	Mitchell, Elijah E.	Avoca	R. D
Butler, W. C.	Heltonville	R. 3	McDonald, Andrew J.	Bedford	R. D
Berry, A. F.	River Vale	R. 3	McLaughlin, Oliver	Bartlettville	R. 10
Dixon, H. C.	Tunnelton	R. D	Newland, J. Wesley	Bedford	R. D
Donics, Thos. M.	Tunnelton	R. 10	Pearson, James C.	Mitchell	R. D
Ellison, W. T.	Heltonville	R. D	Phipps, John M.	Bedford	R. D
Emery, Chas. H.	Bedford	R. D	Phipps, D. C.	Williams	R. D
Faubion, James	Heltonville	R. 10	Powell, James E.	Huron	R. D
Faucett, John H.	Bedford	R. D	Rariden, S. A.	Bedford	R. 10
Freeland, John T.	Bedford	R. D	Rariden, C. E.	Bedford	R. D
Gardner, Joseph	Bedford	R. D	Smith, Wm. H.	Leesville	R. 10
Gunn, J. H.	Springville	R. 10	Smith, Spenser W.	Leesville	R. D
Hunter, F. S.	Fort Riter	R. D	Short, Wesley	Springville	R. D
Hornocker, Simon D.	Silverville	R. 10	Short, Richard B.	Oolitic	R. D
Hon, B. J.	Bedford	R. D	Voyles, Harvey	Fayetteville	R. D
Judah, Morris T.	Heltonville	R. 10	Yost, J. L. W.	Mitchell	R. D
Ketcham, John D.	Tunnelton	R. D	Yandell, Wm.	Huron	R. 10
LA FORCE, H. C.	Bedford	R. D			

Regulars, 47.

Madison County.

Alexander, J. L.	Chesterfield	N. R.	Cook, D.	Fishersburg	R. 10
Armington, J. L.	Chesterfield	R. 3	Cook, Ward	Pendleton	R. D
Armington, C. L.	Anderson	R. D	Coffin, A. D.	Alexander	H. D
Armfield, J. D.	Elwood	R. D	Chiles, B. F.	Frankton	P-M. D
Armfield, T. O.	Anderson	R. D	Cullen, J. C.	Anderson	R. D
Ardery, Oscar	Anderson	R. D	Clymer, D. H.	Elwood	R. 10
Barnes, D.	Anderson	N. R.	Clymer, D. C.	Elwood	R. 10
BRANCH, C. N., JR.	Anderson	R. D	Crismond, J. M.	Elwood	P-M. D
Branch, C. N., Sr.	Anderson	R. D	Cook, C. H.	Pendleton	R. D
Broadbent, O.	Moonsville	R. D	Cook, John	Pendleton	R. D
Brown, M.	Anderson	R. D	Diven, C. E.	Perkinsville	R. D
Brickley, W. P.	Anderson	P-M. D	Davidson, J. W.	Pendleton	R. D
Brownback, O. W.	Pendleton	R. D	Davis, J. W.	Anderson	P-M. D
Burr, C. S.	Anderson	R. D	Ebert, J. D.	Dundee	R. D
Blair, D. M.	Anderson	R. 10	Edwins, S. W.	Elwood	R. D
Brower, H. M.	Anderson	R. D	Fussell, L. B.	Markleville	R. D
Chittenden, Geo. W.	Anderson	R. D	French, W. J.	Frankton	R. D
Coverston, J. W.	Frankton	R. 10	Fairfield, W. H.	Anderson	R. D
Callaway, B. T.	Elwood	R. 10	Fairfield, Nellie	Anderson	R. D
Craneheld, M. G.	Summitville	N. R. 10	Fallis, A. G.	Summitville	R. D

Madison County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Garver, Wm. R.	Anderson	R. D	Peden, G. P.	Alexandria	R. D
Garrison, W. M.	Perkinsville	R. D	Preston, G. T.	Anderson	R. D
Ginsinger, —	Florida	R. 10	Rogers, Ellen.	Pendleton	H. 10
Ginn, J. H.	Elwood	P.-M. D	Rider, D. M.	Anderson	R. D
Graham, J. J.	Lapelle	H. D	Riggs, —	Linwood	R. D
Harter, W. P.	Anderson	R. 3	Rayer, —	Anderson	R. D
Harter, J. H.	Anderson	R. D	Rider, G. R.	Alexandria	R. D
Hunt, J. W.	Anderson	R. D	Stewart, Jones	Anderson	R. D
Hunt, Val	Anderson	R. D	Stuart, —	Linwood	R. D
Huston, A. S.	Anderson	P.-M. D	Saunders, J.	Anderson	R. D
Hilligass, G. H.	Anderson	R. 3	Sears, A. H.	Anderson	H. D
Horn, Wm. N.	Anderson	H. D	Snofer, A. R.	Anderson	R. D
Hammond, Jno	Perkinsville	R. 3	Spann, B. F.	Anderson	R. D
Hougham, J. D.	Perkinsville	R. D	Stamm, Wm.	Anderson	R. D
Jones, H. E.	Lapelle	R. D	Small, N.	Anderson	E. D
Kelley, J. N.	Anderson	R. D	Strong, S. M.	Alexandria	R. D
Knesis, W. W.	Anderson	R. D	Sellers, J.	Anderson	R. D
Lewis, W. H.	Pendleton	R. D	Scott, Wm. T.	Florida	P.-M. D
Line, L. C.	Alexandria	R. D	Sigler, D.	Elwood	R. D
Miller, Elizabeth.	Anderson	E. D	Swallow, G. E.	Summitsville	R. D
Morlon, A. F.	Summitsville	P.-M. D	Seins, T. D.	Elwood	E. 10
Moore, J. R.	Lapelle	R. D	Sullivan, —	Alexandria	R. D
Morgan, G.	Gillman	R. 10	Taylor, H. W.	Anderson	H. D
Mendenhall, Chas.	Anderson	E. D	Taylor, H. W.	Anderson	H. D
McNutt, C. T.	Elwood	R. D	Van Meeter, J. H.	Florida	R. D
Nuzum, D. P.	Elwood	E. 3	Van Nuy, Wm.	Anderson	R. D
Otto, A. C.	Alexandria	R. D	Walters, L. P.	Anderson	R. D
Perry, A. J.	Alexandria	R. D	Wickersham, N.	Anderson	R. D
Perry, J. W.	Alexandria	R. D	Wright, C. R.	Frankton	R. D
Pugh, J. W.	Alexandria	R. D	Willson, S. C.	Anderson	R. D
Pence, B. M.	Anderson	R. D	Wetham, S. S.	Anderson	P.-M. D
Petro, B. G.	Markleville	R. 10	White, F. M.	Summitsville	N. R. D
Pratt, C. C.	Ovid	R. D	White, J. W.	Summitsville	N. R. D
			Yates, W. J.	Anderson	R. D

Regular, 80; Homeopathic, 6; Eclectic, 7; Physio-Medical, 9; not reported, 5.

Marion County.

Abbott, Chas. H.	Indianapolis	E. 3	Bigger, Richard T.	Indianapolis	R. D
Abbott, Francis M.	Indianapolis	E. D	Blitz, A.	Indianapolis	R. D
Abbott, Samuel	Indianapolis	P.-M. D	Bobbs, Andrew J.	Indianapolis	R. D
Adams, Abbie M.	Indianapolis	E. D	Boland, K. H.	Indianapolis	R. D
Adams, Mary E.	Indianapolis	P.-M. D	Bowers, D. W.	Indianapolis	P.-M. D
Allen, Horace R.	Indianapolis	E. 3	Bowers, John V.	Millersville	R. D
Allen, Wesley	West Newton	R. D	Boyce, L. E.	Millersville	R. D
Anderson, Jas. E.	Indianapolis	R. D	Boyd, J. T.	Indianapolis	R. D
Andrews, V. E.	Indianapolis	E. D	Boyden, Wilbur A.	Indianapolis	R. D
Anthony, Emanuel.	Indianapolis	P.-M. D	Brayton, Alembert.	Indianapolis	R. D
Anthony, Elisha G.	Indianapolis	P.-M. D	Brennen, Edward J.	Indianapolis	R. D
Alexander, Robert C.	Indianapolis	R. D	Briggs, Elmer.	Indianapolis	H. D
Anthony, Jas. R.	Indianapolis	R. D	Blu, Uriah L.	Indianapolis	E. D
Barnes, Danson E.	Indianapolis	E. D	Brown, E. A.	Brightwood	R. D
Barnes, Carl L.	Indianapolis	E. D	Brown, Corydon	Gallaudet	H. D
Bergen, E. D.	Indianapolis	H. D	Brown, Geo. J.	Indianapolis	R. 3
Bacon, Edgar H.	Indianapolis	H. 10	Brown, John R.	Indianapolis	R. D
Baker, A. B.	Indianapolis	E. D	Brown, John S.	Indianapolis	R. 3
Ball, Addison W.	Indianapolis	R. D	Brown, Josiah L.	Indianapolis	R. D
Ballard, E. P.	Indianapolis	R. D	Brown, Samuel M.	Gallaudet	R. 10
Barbour, E. P.	Indianapolis	R. D	Browne, Henry J.	Indianapolis	R. D
Barnes, Chas. A.	Southport	R. D	Browning, William J.	Indianapolis	R. D
Barnes, Henry F.	Indianapolis	R. D	Browning, Wm. M.	Indianapolis	R. D
Barnes, Arthur	Southport	R. D	Brubaker, A. S.	Indianapolis	R. D
Barnhill, T. J.	Irrington	R. D	Bryan, Thomas N.	Indianapolis	R. D
Barrett, J. L.	Indianapolis	N. R.	Brayan, Jas.	Indianapolis	N. R. 10
Barrum, C. B.	Indianapolis	E. D	Brynes, Dan'l C.	Indianapolis	R. D
Bates, Joseph W.	Broad Ripple	R. D	Bryson, Rachael A.	Indianapolis	P. M. D
Baughman, S. S.	Indianapolis	R. D	Butterfield, S. W.	Indianapolis	R. D
Beck, W. S.	Indianapolis	R. D	Butterfield, S. A.	Indianapolis	R. D
Bedford, C. T.	Indianapolis	P.-M. D	Bell, Leonard	Indianapolis	H. D
Beebinger, John	Cumberland	R. D	Bottoff, D. E.	Indianapolis	H. D
Bell, Guido	Indianapolis	R. D	Baugh, Wm. J.	Indianapolis	R. D
Bennett, Peter S.	Indianapolis	R. 10	Bowers, Edward	Indianapolis	R. D
Bentley, W. R.	Indianapolis	H. D	Clarke, Wm. B.	Indianapolis	H. D
Bigger, Robert H.	Indianapolis	R. D	Cain, J. C.	Haughville	R. D

Marion County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Campbell, Levi S.	Indianapolis	R. D	Fillmore, Edwin A.	Indianapolis	R. D
Cameron, J. J.	Indianapolis	— D	Finsley, F. C. N.	Indianapolis	R. D
Canada, J. L.	Indianapolis	R. D	Fisher, G. C.	Indianapolis	R. D
Canfield, D. C.	Indianapolis	R. D	Fonner, W. H.	Indianapolis	R. D
Canter, S. J.	Indianapolis	R. D	Farmer, Samuel W.	Indianapolis	E. D
Carter, H. W.	Indianapolis	R. D	Feree, S. W.	Indianapolis	R. D
Carter, H. C.	Indianapolis	R. D	Ferguson, C. E.	Indianapolis	R. D
Carter, Jas.	Indianapolis	— 3	Ferguson, Frank	Indianapolis	R. D
Carter, Nathan P.	Mapleton	R. D	Field, M. H.	Indianapolis	R. D
Carey, Geo. A.	Indianapolis	R. D	Field, O. H.	Indianapolis	R. D
Carey, E. E.	Indianapolis	R. D	Field, E. U.	Cumberland	R. D
Carson, L. O.	Traders Point	R. D	Fisher, A. W.	Indianapolis	P-M. D
Carson, Wm. D.	Bridgeport	R. D	Fletcher, C. I.	Indianapolis	R. D
Casel, L. B.	Indianapolis	R. 3	Fletcher, Wm. B.	Indianapolis	R. D
Carvin, James M.	Indianapolis	— 10	French, Mattie J.	Indianapolis	R. D
Cable, Geo. A.	New Augusta	R. D	Freitshy, John M.	Indianapolis	H. 10
Chitwood, G. R.	Indianapolis	R. D	Frink, C. W.	Indianapolis	R. D
Clark, Wm. H.	Indianapolis	R. D	Foster, Lafayette	Indianapolis	P-M. D
Clemmer, F. O.	Indianapolis	R. D	Fuller, William	Indianapolis	— 10
Cline, L. C.	Indianapolis	R. D	Geer, Norman M.	Indianapolis	R. D
Cloud, Caleb S.	Indianapolis	— 10	Geis, John F.	Indianapolis	R. D
Churchill, John C.	Indianapolis	R. D	Gibson, John B.	Indianapolis	R. D
Combs, Geo. W.	Indianapolis	R. D	Galoway, Clinton	Indianapolis	R. D
Cominger, John A.	Indianapolis	R. D	Garrison, James	Indianapolis	R. R
Cole, J. J.	Indianapolis	R. D	Garver, John J.	Indianapolis	R. R
Cook, Geo. J.	Indianapolis	R. D	Gates, Marie	Indianapolis	R. D
Collins, Wm. F.	Cumberland	R. 10	Gentle, L. F.	Indianapolis	R. D
Compton, J. A.	Indianapolis	H. D	Gill, John	Indianapolis	N. R. 10
Conner, Wm. H.	Indianapolis	— 10	Gray, William	Indianapolis	R. D
Cooper, Chas. A.	Indianapolis	— 10	Graydon, R. G.	Southport	R. D
Cooper, Wm. C.	Indianapolis	E. D	Green, L. M.	Indianapolis	R. D
Cory, Andrew F.	Oaklandon	E. D	Green, K. M.	Indianapolis	R. D
Cox, Joseph	Indianapolis	R. D	Green, W. S.	Indianapolis	R. D
Crest, John B.	Indianapolis	E. D	Griggs, Oscar B.	Bridgeport	R. D
Christ, D. O.	Indianapolis	R. D	Gaylord, Harry G.	Indianapolis	R. D
Cross, S. E.	Indianapolis	R. D	Glass, William M.	Indianapolis	R. D
Culver, Thos. M.	Indianapolis	E. D	George, Sam'l F.	Indianapolis	E. D
Cunningham, H. S.	Indianapolis	R. D	Groff, John H.	Indianapolis	R. D
Curry, Thomas W.	Southport	R. D	Grab, Orion O.	Indianapolis	R. D
Crow, Chas. R.	Indianapolis	E. D	Haeberlin, Herman	Indianapolis	R. D
Cunningham, E. M.	Indianapolis	R. D	Harold, Isaac S.	Indianapolis	P-M. D
Carson, John H.	Indianapolis	R. D	Harrison, Geo. E.	Indianapolis	E. D
Courtney, Thomas E.	Indianapolis	R. D	Heaton, Asa H.	Indianapolis	E. D
Clark, Harry P.	Indianapolis	R. D	Heidelmom, John N.	Indianapolis	R. D
Daniel, Joseph A.	Indianapolis	R. D	Hessler, Robert	Indianapolis	R. D
Daniels, K. A.	Indianapolis	R. D	Hollingsworth, M. P.	Indianapolis	R. D
Darrach, Geo. W.	Cumberland	R. D	Haltmon, C. C.	Indianapolis	R. D
Daugherty, John H.	Irvington	R. D	Hunt, Alfred T.	Indianapolis	P-M. D
Davidson, J. O.	Indianapolis	P-M. D	Hadley, Evan	Indianapolis	R. D
Davidson, G. U.	Indianapolis	P-M. D	Hart, W. M.	Indianapolis	P-M. D
Davis, R. A.	Indianapolis	R. D	Hasty, Geo.	Indianapolis	P-M. D
Davis, Wm. C.	Indianapolis	E. D	Haugh, John A.	Indianapolis	R. D
Davis, Jacob A.	Indianapolis	P-M. D	Haynes, John R.	Indianapolis	H. D
DEITCH, O. S.	Indianapolis	R. D	Hay, H. A.	Indianapolis	H. D
Denkewalter, F. W.	Indianapolis	R. D	Hays, F. W.	Indianapolis	R. D
Denson, H. A.	Indianapolis	R. D	Hays, Florence	Indianapolis	R. D
DePuy, A. H.	Indianapolis	E. D	Hammer, N. L.	Indianapolis	P-M. D
Divens, C. W.	Indianapolis	E. D	Hamilton, J. A.	Indianapolis	— 10
Dudley, A. J.	Indianapolis	R. D	Haynes, A. H.	Indianapolis	R. D
Duncan, Hiram	Indianapolis	R. D	Heaton, E. H.	Indianapolis	E. D
Dunlap, John M.	Indianapolis	R. D	Heil, Chas. P.	Indianapolis	E. D
Dunning, L. H.	Indianapolis	R. D	Helming, H.	Indianapolis	— 10
Dunning, James H.	Indianapolis	R. D	Heltman, J. K.	Oaklandon	R. D
Duzan, G. N.	Indianapolis	R. D	Henthorne, L. S.	Indianapolis	R. D
DeHass, Thos. W.	Indianapolis	R. D	Hervey, Edwin V.	Indianapolis	R. D
Douglass, Charles	Indianapolis	H. D	Hendricks, H. W.	Indianapolis	E. D
Durham, Charles E.	Indianapolis	R. D	Hervey, Jas. W.	Indianapolis	R. D
Earp, Samuel E.	Indianapolis	R. D	Hettinger, J. B.	Indianapolis	— D
Eastman, Joseph	Indianapolis	R. D	Hibben, Julia	Indianapolis	R. D
Ebberts, J. A.	Indianapolis	R. D	Henshaw, Thomas	Nora	R. D
Edenharter, G. F.	Indianapolis	R. D	Hodges, Edwin F.	Indianapolis	R. D
Egolf, H. M.	Indianapolis	R. D	Holland, E. A.	Indianapolis	R. D
Eisenbeiss, E. M.	Indianapolis	R. D	Hopkins, A. G.	Indianapolis	R. D
Eisenbeiss, C. M.	Indianapolis	R. D	Houser, Jas. A.	Indianapolis	E. D
Elbert, S. A.	Indianapolis	R. D	Hoover, John E.	Indianapolis	R. D
Elder, Elijah S.	Indianapolis	R. D	Hoss, Jacob V.	Indianapolis	R. D
Ellis, Wilson	Indianapolis	R. D	Howard, Edward	Indianapolis	E. D
Eskeu, H. T.	Indianapolis	R. D	Hurley, M. F.	Indianapolis	E. D
Ewing, C. K.	Indianapolis	H. D	Haynes, A. C.	Indianapolis	R. D

Marion County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Houser, Solon K. . .	Indianapolis .	R. D	Morrison, F. A. . .	Indianapolis .	R. D
Hagg, Emil Lewis A .	Indianapolis .	R. D	Morrow, J. E. . . .	Indianapolis .	R. D
Hibbs, Jas. I. . . .	Indianapolis .	E. D	Muhl, Emil	Indianapolis .	R. D
Harrison, J. Chas .	Indianapolis .	R. D	McAllister, Lucas .	Indianapolis .	H. D
Hervey, Sam'l R. . .	Indianapolis .	R. D	McCabe, Henry . . .	Indianapolis .	E. D
Hutchins, Frank M .	Indianapolis .	R. D	McCaine, T. J. . . .	Indianapolis .	R. D
Hunt, Geo. Edwin . .	Indianapolis .	R. D	McClellan, A. . . .	Indianapolis .	R. D
Jameson, Henry . . .	Indianapolis .	R. D	McConnell, L. C. . .	Indianapolis .	R. D
Jeffries, W. E. . . .	Indianapolis .	R. D	McCurdy, L. A. . .	Indianapolis .	R. D
Jeter, Frank	Indianapolis .	E. D	McDonald, W. B. . .	New Augusta .	R. D
Jones, Levi M. . . .	Indianapolis .	R. D	McGaughey, Sam'l .	Acton	R. D
Jones, Stephen . . .	Indianapolis .	E. D	McKhan, Wm	Indianapolis .	R. D
Johnson, W. H. . . .	Brightwood . .	R. D	McLain, L. C. . . .	Indianapolis .	R. D
Johnson, R.	Indianapolis .	R. D	McKeown, John . .	Indianapolis .	R. D
Jennings, D. B. . . .	Indianapolis .	E. D	McNutt, W. Y. . . .	Indianapolis .	R. D
Jordan, John S. . . .	Indianapolis .	E. D	Moore, Mablon M . .	Indianapolis .	— 3
Jordan, L. W.	Indianapolis .	H. D	McMurry, Olive B. C	Indianapolis .	R. D
Jordan, Dewit . . .	Indianapolis .	R. D	Manchester, J. H. . .	Indianapolis .	R. D
Karsitter, Wm. B. . .	North Ind'pl's .	R. D	McLean, Jas	Indianapolis .	R. D
Keen, Daniel V. . . .	Indianapolis .	N. R	Neff, Daniel	Indianapolis .	— 10
Kendal, R. A.	Indianapolis .	N. R	Nesh, S. W.	Indianapolis .	R. D
Kennedy, John V. . .	Acton	R. D	Nesbit, Joseph A. .	Castleton . . .	R. D
Kahlo, George W. . .	Indianapolis .	R. D	Noble, Edward . . .	Indianapolis .	E. D
Kayne, Jennie A. . .	Indianapolis .	R. D	Newlin, Stanly C. .	Indianapolis .	R. D
Kahlo, Harry C. . . .	Indianapolis .	R. D	Oliver, D. H.	Indianapolis .	R. D
Knew, Charles B. . .	Indianapolis .	R. D	Oliver, A. H.	Indianapolis .	R. D
Knap, W. H.	Indianapolis .	E. D	Oliver, J. H.	Indianapolis .	R. D
Knight, O. C.	Indianapolis .	E. D	Outland, E. M. . . .	Indianapolis P.-M.	D
Keller, Christopher .	Indianapolis .	10	Page, L. F.	Indianapolis .	R. D
Kindleberger, W. H .	Indianapolis .	R. D	Patterson, A. W. . .	Indianapolis .	R. D
Kendrick, W. H. . . .	Indianapolis .	E. D	Patterson, E. R. . .	Indianapolis .	E. D
Kerley, R. M.	Indianapolis .	R. D	Pantzer, H. O. . . .	Indianapolis .	R. D
Kitchen, John M. . .	Indianapolis .	R. D	Park, H. A. S. . . .	Indianapolis .	E. D
Kidd, W. J.	Indianapolis .	E. D	Partlow, John W. .	Indianapolis .	R. D
Kishaddon, Henry . .	Indianapolis .	D	Parsons, John S. . .	Indianapolis .	R. 10
Koch, A. J.	Indianapolis .	P.-M. D	Payne, Jas. H. . . .	Julietta	R. D
Krumrine, J. A. . . .	Irvington . . .	H. D	Peachee, Harrison .	Maywood	R. 10
Lake, Mary E.	Indianapolis .	R. D	Pfaff, O. G.	Indianapolis .	R. D
Lampton, G. W. . . .	Indianapolis .	10	Pettijohn, O. B. . .	Indianapolis .	R. D
Lash, H. M.	Indianapolis .	R. D	Pickereil, Geo. W. .	Indianapolis .	E. D
Lambert, John A. . .	Indianapolis .	R. D	Pink, Herman	Indianapolis .	R. D
Landener, Simon C. .	Indianapolis .	H. D	Potter, Theo	Indianapolis .	R. D
Laycock, R. T.	Indianapolis .	E. D	Potter, G. D.	Indianapolis .	R. D
Lewis, E. K.	Indianapolis .	R. D	Prunk, D. N.	Indianapolis .	E. D
Lewis, James	Indianapolis .	D	Purmaa, D. M. . . .	Indianapolis .	R. D
Littlejohn, H. C. . .	Indianapolis .	R. D	Patty, J. H.	Indianapolis .	R. D
Longshaw, Anna M. .	Indianapolis .	R. D	Pittsford, Charles A	Indianapolis .	E. D
Lockridge, John E. .	Indianapolis .	R. D	Records, R. Sam'l . .	Indianapolis .	R. D
Loder, C. C.	Indianapolis .	N. R	Ragge, Wm. J. . . .	Indianapolis .	R. D
Long, Henry	Indianapolis .	E. D	Ruse, O. A.	Indianapolis .	R. D
Lohn, John B.	Indianapolis .	R. D	Ratcliff, Barclay . .	West Newton .	R. D
Long, K. W.	Indianapolis .	R. D	Ray, F. E.	West Newton .	R. D
Lutz, Geo. W.	Indianapolis .	R. D	Reed, Wilson	West Newton .	H. D
Lukenbill, O. C. . . .	Indianapolis .	R. D	Reese, Wm	West Newton .	R. D
Manker, F. E.	Indianapolis .	R. D	Reynolds, George W	West Newton .	R. D
Mackey, Arthur . . .	Indianapolis .	R. D	Reade, Jeremiah . .	Traders' Point .	R. D
Madson, Mary M. . .	Indianapolis .	E. D	Records, Samuel . .	Lawrence . . .	R. D
Mapes, Smith H. . . .	Lawrence	R. D	Raymond, Thos. U .	Lawrence	R. D
Martin, U. G.	Indianapolis .	R. D	Ridpath, H. W. . . .	Indianapolis .	R. D
Martin, Francis . . .	Indianapolis .	R. D	Ritter, C. L.	Indianapolis .	R. D
Martin, W. F.	Indianapolis .	R. D	Robeson, W. C. . . .	Indianapolis .	R. D
Marsee, Joseph W. . .	Indianapolis .	R. D	Roberts, R. A. . . .	Indianapolis .	R. D
Maxwell, Allison . .	Indianapolis .	R. D	Robertson, D. W. . .	Indianapolis .	R. D
Mendenhall, A. B. . .	Indianapolis .	R. D	Robins, Wesley . . .	Indianapolis .	E. D
Mendenhall, Elijah .	Indianapolis .	R. D	Robinson, W. J. . . .	Indianapolis .	E. D
Metcalf, Charles N. .	Indianapolis .	R. D	Roesgen, John P. . .	Indianapolis .	— 10
Meyers, John M. . . .	Indianapolis .	R. D	Rooker, James L. . .	Castleton . . .	R. D
Mills, Seth	Valley Mills . .	R. D	Rowe, L. M.	Indianapolis .	R. D
Miller, Edward . . .	Indianapolis .	— 10	Rowley, Wm	Indianapolis .	H. D
Milligan, Jas. W. . .	Indianapolis .	R. D	Rubrush, T. R. . . .	Indianapolis .	R. D
Moffet, F. C.	Indianapolis .	E. D	Rutledge, W. V. . .	Indianapolis .	E. D
Moffet, E. D.	Indianapolis .	R. D	Runnels, O. S. . . .	Indianapolis .	H. D
Monroe, Jasper . . .	Indianapolis .	R. D	Ranneis, Solis	Indianapolis .	H. D
Moore, N. L.	Indianapolis N. R.	R. D	Ryon, Wm. B.	Indianapolis .	E. D
Moore, S. H.	Indianapolis .	R. D	Redden, Thos. D. . .	Indianapolis .	R. D
Moore, Mark W. . . .	Indianapolis .	R. D	Robinson, Ross R . .	Indianapolis .	R. D
Moore, Thos	Indianapolis .	— 3	Rixy, Samuel	Indianapolis .	R. D
Moore, W. G.	Indianapolis .	R. D	Rudy, Frank T. . . .	Indianapolis .	R. D
Morgan, W. V.	Indianapolis .	R. D	Ray, Charles C. . . .	Indianapolis .	R. D

Marion County—Continued.

Name.	Post Office.	School.	Name.	Post Office.	School.
Schaefer, R.	Indianapolis	R. D	Van Zandt, Garrett . .	Indianapolis	R. D
Schmit, E.	Indianapolis	E. D	Vernon, Geo. W. . . .	Indianapolis	R. D
Selman, A. G.	Indianapolis	10	Virden, John E. . . .	Indianapolis	R. D
Serrin, James E. . . .	Indianapolis	R. D	Van Hummel, Quincy .	Indianapolis	R. D
Sellers, T. P.	Indianapolis	R. D	Van Hummel, Henry . .	Indianapolis	R. D
Scherer, Simeon P. . .	Indianapolis	R. D	Van Horn, Claude B. .	Indianapolis	R. D
Sigfried, Julia A. . . .	Indianapolis	E. D	Wagner, Theo. A. . . .	Indianapolis	R. D
Silvey, Hilary	Castleton	3	Walde, Robert	Indianapolis	P-M D
Slims, J. T.	Castleton	R. D	Walker, John C. . . .	Indianapolis	R. D
Smith, A. G.	N. Indianapolis	E. D	Walker, I. C.	Indianapolis	R. D
Smith, Mary	Indianapolis	R. D	Walker, Joseph B. . . .	Indianapolis	R. D
Smith, Marthy J. . . .	Indianapolis	R. D	Wail, David	Clermont	R. D
Smith, Walter	Indianapolis P-M D	D	Wail, James H.	Haughville	E. D
Spees, Byron E.	Glens Valley	R. D	Walters, P. J.	Indianapolis	R. D
Stacker, Wm. H.	Indianapolis	R. D	Warner, W. H.	Indianapolis	R. D
Stackhouse, Urbine . .	Indianapolis	R. D	Wands, Wm.	Indianapolis	R. D
Stephens, Serih	Indianapolis	R. D	Ward, A. O.	Indianapolis	R. D
Starch, L. A. E.	Indianapolis	R. D	Waterman, L. D. . . .	Indianapolis	R. D
Sturtevant, Geo. W. . .	Indianapolis	H. D	Ward, Eoswell	Indianapolis	R. D
Snowden, Jessie	N. Indianapolis R. D	D	Webb, Joshua	Indianapolis	N. R
Spees, G. W.	Glens Valley	R. D	Weiss, C. G.	Indianapolis	R. D
Spicer, J. W.	Acton	R. D	Wells, J. B.	Indianapolis	R. D
Spink, M. A.	Indianapolis	R. D	Wells, B. P.	Indianapolis	R. D
Spohr, J. C.	Indianapolis	R. D	Westholte, C. A. . . .	Indianapolis	3
Stillson, Joseph	Indianapolis	R. D	White, A. R.	Indianapolis	R. D
Stockton, Sarah	Indianapolis	R. D	White, L. E.	Indianapolis P-M D	D
Stratford, A. W.	Indianapolis	R. D	White, S. M.	Indianapolis P-M D	D
Stein, Fredrick	Indianapolis	R. D	White, G. J.	Indianapolis	R. D
Stone, R. French	Indianapolis	R. D	Whitney, G. F.	Indianapolis	R. D
Stevenson, J. C.	Indianapolis	R. D	Williams, James R. . .	West Ind'pl's	10
Stewertant, G. D. . . .	Indianapolis	H. D	Williams, James A. . .	Indianapolis	R. D
Shater, Henry	Indianapolis	10	Williams, R. T.	Indianapolis	10
Stutcliff, John	Indianapolis	R. D	Wishard, W. H.	Indianapolis	R. D
Swain, Rachael	Indianapolis	E. D	Wishard, W. M.	Indianapolis	R. D
Steven, Jas. E.	Indianapolis P-M D	D	Wilson, Amos L.	Indianapolis	R. D
Swain, Fremont	Indianapolis	R. D	Wilson, C. L.	Indianapolis	R. D
Talbutt, J. N.	Indianapolis	R. D	Woehman, E. A.	Indianapolis	H. D
Taylor, Jas. H.	Indianapolis	R. D	Wood, Clare	Haughville	E. D
Thomas, R. C.	Haughville	R. D	Wood, Levi	Indianapolis P-M D	D
Thomas, W. H.	Indianapolis	R. D	Wood, N. V.	Indianapolis	R. D
Thompson, D. A.	Indianapolis	R. D	Woodburn, James H. .	Indianapolis	R. D
Thompson, J. L.	Indianapolis	R. D	Woodburn, F. C.	Indianapolis	R. D
Thompson, W. C.	Indianapolis	R. D	Woodard, U. D.	Indianapolis P-M D	D
Thompson, O. K.	Indianapolis	R. D	Woodard, S. G.	Indianapolis	R. D
Thompson, Thos. L. . .	Irington	R. D	Woolen, G. V.	Indianapolis	R. D
Todd, L. L.	Indianapolis	R. D	Yoke, Charles	Bridgeport	R. D
Tolly, W. C.	Indianapolis	R. D	Young, James	Indianapolis	10
Tomlinson, V. B.	Indianapolis	R. D	Young, Michael A. . . .	Indianapolis	R. D
Teague, Albert E. . . .	Indianapolis	E. D	Young, Thomas J. . . .	Indianapolis	R. D
Towles, Alfred M. . . .	Indianapolis	R. D	Young, W. L.	Indianapolis	E. D
Thomas, Eli J.	Indianapolis	R. D			

Regular, 343; Eclectic, 61; Homeopathic, 23; Physio-Medical, 26; not reported, 35.
Total, 488.

Marshall County.

Borton, T. A.	Plymouth	R. 10	Linn, Timothy T. . . .	Bourbon	R. D
Bower, Isaiah	Plymouth	R. 10	Loring, Samuel C. . . .	Burr Oak	R. D
Baker, Joseph	Plymouth	E. 10	Martin, J. S.	Plymouth	H. D
Bell, John F.	Inwood	R. 10	Miller, Allen G.	Tyner City	H. D
Brooke, Jared E.	Plymouth	R. D	Moore, Allen	La Paz	R. D
Brown, C. A.	Plymouth	H. D	Matchette, A. C.	Bourbon	R. D
Cagle, A. Z.	Maxinkuckee	R. D	Neville, R.	Teegarden	R. 10
Chapman, Clark	Argos	E. 10	Oyler, Wm. A.	Argos	R. 3
Denniston, Jas. M. . . .	La Paz	R. 10	Pocock, Elias H.	Walnut	R. D
Dunlap, Elizabeth W. . .	Plymouth	H. 10	Richey, S. R.	Donaldson	R. 10
Eidson, J. W.	Bourbon	R. D	Rea, Oliver A.	Marmont	R. D
Eloy, Lorenzo M.	Ilion	R. D	Reynolds, G. R.	Plymouth	R. D
France, Samuel	Bourbon	R. D	Shaw, A. M.	Tyner City	R. D
Gould, S. W.	Argos	R. D	Smith, J. W.	Plymouth	R. D
Herring, N. A.	Bremen	E. D	Sutton, James A. . . .	Argos	R. 10
Holtzendorf, A. C. . . .	Plymouth	R. D	Spencer, Joseph	Ilion	E. 10
Hamilton, John J. . . .	Plymouth	R. D	Tripp, Franklin	Bremen	E. 10
Jackson, William	Plymouth	E. D	Viets, Ella M.	Plymouth	H. 10
Johnson, Luther	Bourbon	R. 10	Wabb, G. Franklin . . .	Bremen	R. D
Kaezer, Jacob	Plymouth	R. D	WILSON, JAS. H. . . .	Plymouth	R. D
Knott, David C.	Argos	E. D	Wiseman, B. W. S. . . .	Marmont	R. D
Kendall, J. T.	Argos	R. D	Youngman, A. B.	Bremen	R. D
Kiser, James H.	Inwood	R. D			

Regular, 33; Eclectic, 7; Homeopathic, 5.

Martin County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Brittain, S. H. . . .	Loogootee . . .	R. D	Robinson, G. M. . . .	Loogootee . . .	R. 3
Campbell, J. C. L. . .	Loogootee . . .	R. 3	Shirley, H. W. . . .	Shoals . . .	R. D
Courtney, Thomas . .	Lost River . . .	R. D	Sims, J. N. . . .	Dover Hill . . .	E. 3
Dollins, T. C. . . .	Trinity Springs. R. 3		Solomon, J. J. . . .	Shoals . . .	P. M. D
Dooley, M. M. . . .	Loogootee . . .	R. D	Trueblood, J. C. . .	Loogootee . . .	R. D
FREEMAN, G. M. . . .	Shoals . . .	R. D	Thomas, W. H. . . .	Keck's Church. R. 10	
Malott, George F. . .	Trinity Springs. R. 10		Wright, A. W. . . .	Short . . .	R. D
Plummer, I. N. . . .	Shoals . . .	R. D	Hays, T. A. . . .	Keck's Church. R. D	
Porter, A. W. . . .	Loogootee . . .	E. D			

Regular, 14; Eclectic, 2; Physio-Medical, 1.

Miami County.

Alford, Henry. . . .	Peru . . .	R. 10	Litzenberger, O. P. .	Converse . . .	R. 3
Boggs, M. . . .	Macy . . .	R. 10	Mendenhall, O. A. .	Converse . . .	R. D
BLOOMFIELD, E. M. .	Peru . . .	R. D	Moore, J. W. . . .	Mexico . . .	P. M. D
Black, F. M. . . .	Peru . . .	E. D	Marsh, L. S. . . .	Peru . . .	R. D
Barnes, John . . .	Macy . . .	R. 10	Meek, J. A. . . .	Bunker Hill . .	R. D
Baldwin, John A. . .	Converse . . .	E. 10	Maughmer, G. C. . .	Wawpecong . . .	R. D
Brower, Josiah . . .	Gilead . . .	E. D	Malsbury, J. O. . .	Peru . . .	R. D
Belew, J. C. . . .	Chili . . .	E. 10	Newell, J. M. . . .	Denver . . .	R. D
Baldwin, M. F. . . .	North Grove . .	E. D	Orr, A. C. . . .	Macy . . .	R. D
Bradley, T. . . .	Peori . . .	P. M. D	Passage, H. V. . . .	Peru . . .	R. D
Brenton, Wm. H. . .	Peru . . .	R. D	Ridenour, David . .	Chili . . .	R. D
Cox, Edgar . . .	Bunker Hill . .	R. D	Ramsey, G. S. . . .	Peru . . .	R. D
Dodds, A. J. . . .	Mexico . . .	R. D	Rutherford, C. E. .	Peru . . .	H. D
Davis, L. . . .	Miami Town . .	R. D	Stewart, F. E. . . .	Peru . . .	H. D
Eriermood, E. K. . .	Peru . . .	R. D	Stewart, W. B. . . .	Peru . . .	H. D
Erete, I. C. . . .	Deedsville . . .	R. 5	Smith, A. F. . . .	Wawpecong . . .	R. D
Graham, B. R. . . .	Peru . . .	R. D	Spencer, Jared . . .	Peru . . .	R. D
Gregg, Elijah . . .	Bunker Hill . .	E. D	Schevier, W. C. . .	Bunker Hill . .	R. D
Higgins, C. B. . . .	Peru . . .	R. D	Taylor, Clarre . . .	Peru . . .	R. D
Helm, C. J. . . .	Peru . . .	R. D	Watkins, F. H. . . .	Peru . . .	R. 10
Hosman, W. E. . . .	Denver . . .	E. D	Wilson, J. S. . . .	Macy . . .	E. 3
Haidley, Wm. H. . .	Amboy . . .	E. D	Wareham, J. W. . .	Gilead . . .	R. 3
Hjams, Thos. L. . . .	North Grove . .	R. D	Ward, J. O. . . .	Peru . . .	R. D
Kelsey, J. S. . . .	Converse . . .	R. D	Wilson, Wm. F. . . .	Bunker Hill . .	R. D
Kalbfleisch, A. H. .	Peru . . .	H. D	Zimmer, E. G. . . .	Sante Fe . . .	R. D

Regular, 34; Eclectic, 10; Homeopathic, 4; Physio-Medical, 2.

Monroe County.

Axtell, A. J. . . .	Bloomington . .	R. 10	Munson, George H. .	Stanford . . .	R. D
Baker, R. E. . . .	Harrodsburg . .	R. D	McLahlan, C. D. . .	Harrodsburg . .	R. D
Bryan, George W. . .	Bloomington . .	R. D	Presley, I. N. . . .	Ellettsville . .	R. D
Dodd, James . . .	Clear Creek . .	R. D	Potts, J. F. . . .	Bloomington . .	R. D
Farr, A. C. . . .	Bloomington . .	R. 3	Rice, N. L. . . .	Clear Creek . .	E. D
HARRIS, JOHN E. . .	Bloomington . .	R. D	Rogers, Joseph M. .	Bloomington . .	R. D
Harris, Rice O. . . .	Ellettsville . .	R. 10	Spencer, A. C. . . .	Unionville . . .	R. D
Harris, W. W. . . .	Ellettsville . .	R. D	Stansifer, G. I. . .	Stinesville . . .	R. D
Holland, P. C. . . .	Bloomington . .	R. D	Tourner, J. P. . . .	Bloomington . .	R. 3
Hon, U. H. . . .	Bloomington . .	R. D	Weir, Robert M. . .	Bloomington . .	R. D
Hon, A. W. . . .	Bloomington . .	R. D	Whitted, W. L. . . .	Bloomington . .	R. D
Lowder, L. T. . . .	Bloomington . .	R. D	Whitted, F. E. . . .	Bloomington . .	R. D
Luzadder, J. E. . . .	Smithville . . .	R. D			

Regular, 24; Eclectic, 1.

Montgomery County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Beatty, James L.	Newmarket	R. D	Hamilton, Albert N.	Waynetown	R. D
Brown, Alonzo F.	Alamo	R. D	Hyten, W. H.	Parkersburg	R. 10
Brown, Ira L.	Alamo	R. D	Irwin, Samuel G.	Crawfordsville	R. D
Berryman, J. A.	Darlington	R. D	Jones, Oliver H.	Crawfordsville	R. D
Black, Dayton R.	New Richmond	R. D	Keegan, Enoch W.	Crawfordsville	R. D
Burroughs, Wm. H.	Shannondale	R. D	Keeney, Henry	Linden	R. 10
Bobo, Cal W.	Clarks Hill	R. D	Kleiser, Arthur J.	Waveland	R. D
Bowers, Homer	New Ross	R. D	Kirkpatrick, Chas. S.	Ladoga	R. D
Bronaugh, Charles E.	New Ross	R. D	King, Richard F.	New Ross	R. D
Ball, Jopher	Waveland	R. D	Layne, Preston M.	Crawfordsville	E. 10
Bilbo, John W.	Waveland	R. 3	Loffin, Wm. A.	Linden	R. D
Cowan, E. H.	Crawfordsville	R. D	May, Willis L.	Crawfordsville	R. D
CHAMBERS, WM. B.	Crawfordsville	H. D	Mahoney, John C.	Ladoga	H. D
Currie, John H.	Darlington	R. 10	Mattier, Thos. S.	Waveland	E. 10
Claypool, Jos. S.	Waynetown	R. 3	McMeehan, Jas. G.	Crawfordsville	R. D
Detcheon, Elliott	Crawfordsville	R. 3	Naylor, Isaac E. S.	Darlington	R. 10
Detcheon, Irwin A.	Crawfordsville	R. D	Olin, L. W.	Blmdale	R. D
Detcheon, Stow S.	New Richmond	R. 10	Ollinger, David E.	Browns Valley	R. 3
Dewey, George W.	Crawfordsville	R. 3	Owsley, J. W.	Darlington	R. D
Dingman, Jos. S.	Linden	R. D	Odell, Jacob L.	Kirkpatrick	E. 3
Duncan, Jos. R.	Crawfordsville	R. D	Price, E. O.	Whitesville	R. D
Drake, Moses P.	Ladoga	R. D	Russell, Jos. P.	Waveland	R. 10
Dunlavy, Ira P.	Waveland	R. D	Straughn, Kent K.	Waveland	R. D
David-on, Jesse W.	Yountsville	R. D	Straughn, John W.	Parkersburg	R. D
Eddingfield, G. W.	Mace	R. D	Shannon, John S.	Shannondale	R. D
Ensinger, John A.	Wingate	R. D	Sutherland, Jas. S.	Crawfordsville	R. D
Ensinger, Sam'l L.	Crawfordsville	R. D	Taylor, John N.	Crawfordsville	H. D
Etter, Jacob R.	Crawfordsville	R. D	Thornberry, John R.	Crawfordsville	R. D
Foster, L. W.	Waynetown	R. D	Talbot, Jesse N.	Alamo	R. D
Gott, W. T.	Crawfordsville	H. D	Tremby, Daniel G.	Mace	R. D
Green, Harry E.	Crawfordsville	R. D	Tintley, DeCaux	Crawfordsville	E. D
Griffith, Martha E. H.	Crawfordsville	R. D	Vancleave, Chas. L.	Wingate	E. D
Griffith, Thos. J.	Crawfordsville	R. D	Washburn, M.	New Richmond	R. D
Graybill, Wm	Ladoga	R. D	Wilson, John B.	Ladoga	R. D
Hutchings, Benj. F.	Crawfordsville	R. D	Walden, Chas. E.	New Market	R. 3
Hutchings, Benj. F.	Crawfordsville	R. D	Williams, Geo. T.	Brown's Valley	R. D
Hoover, Mary	Crawfordsville	R. D	Ware, W. H.	Bowers	R. D
Hurt, Wm. J.	Waynetown	R. D	Young, Dudley	New Market	R. D

Regular, 64; Eclectic, 8; Homeopathic, 4.

Morgan County.

Blackstone, B. D.	Martinsville	R. D	Monicoe, Grant.	Brooklyn	R. D
Bridge, A. P. W.	Alaska	R. 3	Miller, Geo. W.	Martinsville	R. 10
Cure, H. W.	Martinsville	R. 10	McAlister, Alex.	Alaska	R. 10
Farr, W. H.	Martinsville	R. D	Nichols, W. H.	Eminence	R. D
Gravis, C. M.	Martinsville	R. D	Pever, B. H.	Mooreville	R. D
Green, E. V.	Martinsville	R. D	Prather, W. E.	Mahalsville	R. 10
Harvey, D. B.	Eminence	R. D	Robinson, H. C.	Martinsville	R. 10
Hendricks, W. E.	Martinsville	R. D	Reagan, A. W.	Mooreville	R. 10
Henson, Theo	Martinsville	R. D	Seaton, Charles.	Martinsville	R. D
Holiday, T. F.	Monrovia	R. D	Sweet, E. M.	Martinsville	R. D
Horton, Ellis	Monrovia	R. D	Tilford, S. A.	Martinsville	R. D
JOHNSON, J. J.	Martinsville	R. D	Tilford, A. S.	Hall	R. D
Johnson, James J.	Martinsville	R. D	Tarleton, R. H.	Martinsville	R. D
Jones, H. C.	Hall	R. D	Thompson, T. L.	Monrovia	R. D
Kennedy, D. P.	Martinsville	R. D	Thompson, R. D.	Eminence	R. D
Kennedy, John.	Paragon	R. D	Vansant, W. B.	Cope	R. D
Keesinger, C. A.	Martinsville	R. D	Whorlin, J. O.	Waverly	R. D
Knight, J. H.	Morgantown	R. D	Williamson, R. B.	Paragon	R. D
Lindley, C. M.	Brooklyn	R. D	Williams, K. H.	Cope	R. D
Murphy, W. H.	Morgantown	R. D			

Regular, 36; Eclectic, 2.

Newton County.

Allen, A. D.	Rose Lawn	R. D	Lovett, Jno. A.	Goodland	R. D
Boice, R. B.	Kentland	R. D	MCCAIN, R. C.	Kentland	R. D
Caldwell, S. L.	Pilot Grove	H. D	Pratt, B. W.	Goodland	R. D
Chaffee, J. C. M.	Kentland	H. D	Recher, L. H.	Morocco	R. D
Cligmer, —	Goodland	E. D	Recher, Laura	Morocco	R. D
Crissler, J. B.	Brook	R. D	Smith, J. B.	Foresman	R. D
Humston, M. L.	Goodland	R. D	Triplett, C. E.	Morocco	R. D
Hatch, J. A.	Kentland	R. D	Wescott, —	Goodland	H. D
Kronk, —	Goodland	R. D			

Regular, 13; Eclectic, 1; Homeopathic, 3.

Noble County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Buchtel, Mary M. . . .	Ligonier	R. 10	Miller, B. E.	Albion	R. D
Carr, Geo. W.	Ligonier	R. 10	Newton, Warren E. . .	Ligonier	H. D
Coyner, A. G.	Kendallville	N. R	Nifer, F. J.	Brimfield.	R. D
Depew, E. W.	Wolf Lake	R. 10	Reiff, N. G.	Albion	H. D
Dunlap, Robert. . . .	Kendallville	R. 10	Reed, U. W.	Wolf Lake	H. D
Eliot, C. J. F.	Ligonier	H. D	Seymour, C. A.	Wawaka	R. D
Franks, W. H.	Ligonier	R. D	Shobe, W. A.	Ligonier	R. D
Gilbert, Joseph L. . .	Kendallville	R. D	Schletterback, E. L. .	Ligonier	R. 3
Gantz, John	Cromwell.	R. D	Smith, J. F.	Rome City	R. 10
Green, Thomas C. . . .	Albion	R. D	Smith, ———	LaOtto	N. R
Green, W. T.	Albion	R. D	Teal, Norman	Kendallville	R. D
Green, Fernando A. . .	Ligonier	R. D	Trader, James L. . . .	Avilla	R. D
Hays, J. W.	Albion	R. D	Tucker, Henry G. . . .	Cromwell.	R. 10
Isibel, Philander. . .	Kendallville	R. 10	Woodruff, Geo. S. . . .	Ligonier	E. 10
Knepper, E. W.	Ligonier	R. 10	Williams, Warren S. . .	Kendallville	R. D
Lucky, ———	Wolf Lake	N. R	Williams, Nathan	Kendallville	E. 10
LEMMON, S. W.	Albion	R. D	Williams, Robert B. . .	Rome City	R. 10
Mitchell, Wm. L. . . .	Ligonier	R. D	Williams, R. B., Jr. . .	Rome City	R. 3
Moore, Nathan B. . . .	Merriam	R. 10	Wolf, Wm. R.	Ligonier	N. R
Maloney, F. C.	Avilla	R. D			

Regular, 28; Eclectic, 3; Homeopathic, 4; not reported, 3.

Ohio County.

Sullivan, W. H.	Rising Sun	R. D	Rockafellow, W. A. . .	Laughrey	R. 3
Spaulding, John. . . .	Rising Sun	R. D	Miller, J. B.	Laughrey	R. 16
STEVENSON, G. A. . . .	Rising Sun	R. D	Wilsen, W. A.	Guionville.	R. 3
Gillespie, Wm.	Rising Sun	R. D	Elfees, John	Sugar Branch	R. D
Alden, Thomas E. . . .	Rising Sun	R. D			

Orange County.

Brent, William.	French Lick	R. D	Lucket, L. P.	French Lick	R. D
BOYD, CHAS. L.	Paoli	R. D	Lingle, S. L.	Paoli	R. D
Carter, T. P.	Orangeville.	R. 3	Montgomery, J. W. . .	Paoli	R. D
Ellis, William D. . . .	Young's Creek	R. 10	May, George W.	Orleans.	R. D
Gilliat, Wm. B.	Young's Creek	R. D	McDonald, John	Orleans.	R. D
Hunt, Frank P.	Leipsic	R. 3	Patton, Chas. L.	Valune	R. D
Hazlewood, Green. . .	Chambersburg	R. D	Ritter, John A., Jr. . .	West Baden	R. D
Holiday, Benj.	Chambersburg	R. D	Ryan, William E. . . .	French Lick	R. D
Houchenour, W. P. . .	Rigo	R. D	Ritter, Thomas B. . . .	Orangeville.	R. 3
Kinney, J. F.	West Baden	R. D	Sherrod, Wm. F.	West Baden	R. D
Laughlin, E. D.	Orleans.	R. D	Smith, Jas. H.	Newton Stewart R. .	R. 10
Lindley, Laban	Paoli	R. D	Stewart, O. H.	Stamper's Creek R. .	R. D
Lingle, R. W.	Orleans.	R. D			

Regular, 25.

Owen County.

Beaty, W. H.	Spencer.	R. D	Mullinix, E. N.	Spencer.	E. 10
Cox, Nathaniel D. . . .	Spencer.	R. D	Osgood, H. G.	Gosport.	E. D
Dann, C. H.	Coal City	E. D	Plew, John H.	Coal City	E. D
Fisher, B. F.	Quincy	R. D	Pierson, Allen	Spencer.	R. D
Fox, H. A.	Gosport.	R. D	Pritchard, C. A.	Gosport.	R. D
Gantz, Thomas.	Freedom	R. 10	Richards, S. D.	Patrickburg	R. D
Gray, O. F.	Spencer.	R. D	Sloan, John N.	Patrickburg	R. D
Hinkle, J. S.	Coal City	R. D	Rice, W. W. H.	Cuba	R. D
Hixon, W. H.	Farmers	E. 10	Smith, J. W.	Gosport.	R. D
Jones, J. M.	Cataact	R. 10	Stuckey, John M. . . .	Gosport.	R. D
Livingston, J. J. . . .	Freeman	E. D	Stuckey, F. V.	Gosport.	R. D
McDonald, D. H.	Quincy	R. D	Wooden, J.	Gosport.	R. 10
McKelvey, S. R.	Spencer.	R. D	Williams, J. A.	Patrickburg	R. 10
Minich, A. J.	Freedom	R. 10	WILES, W. V.	Spencer.	R. D

Regular, 22; Eclectic, 6.

Parke County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Anderson, Ellen . . .	Rockville . . .	P. M. D	McKey, R. H. W . . .	Russel's Mills . . .	R. 10
Ball, James T . . .	Judson . . .	R. D	Mendenhall, E . . .	Sylvania . . .	R. 10
Boyd, James M . . .	Bloomingsdale . . .	R. D	Martin, A . . .	Bellmore . . .	R. D
Campbell, Anna B . . .	Rockville . . .	R. D	Morris, A. W . . .	Rockville . . .	R. D
Caplinger, Chas . . .	Marshall . . .	R. 3	Mull, W. D . . .	Rockville . . .	R. D
Crooks, James . . .	Bridgeton . . .	R. D	Norman, James J . . .	Rockville . . .	R. D
Darroch, W. P . . .	Hollandsburg . . .	R. D	Purcell, Walter M . . .	Rockville . . .	R. D
Devester, Geo. T . . .	Hollandsburg . . .	R. D	Powell, B. B . . .	Marshall . . .	R. D
Dooley, E. L . . .	Armiesburg . . .	R. 3	Pearse, R. C . . .	Bellmore . . .	R. D
Gillum, Wm. H . . .	Rockville . . .	R. D	Rice, H. J . . .	Rockville . . .	R. D
GOSS, MARION . . .	Rockville . . .	R. D	Reeder, J. C . . .	Montezuma . . .	R. D
Goldsberry, J. A . . .	Bloomingsdale . . .	R. D	Rodgers, H. C . . .	Rockville . . .	R. D
Hansell, David . . .	Lena . . .	R. 10	Stewart, H. W . . .	Rosedale . . .	R. D
Holtman, W. B . . .	Howard . . .	R. 10	Stone, W. O . . .	Rosedale . . .	R. D
Hudson, B. F . . .	Montezuma . . .	R. 10	Thomas, W. L . . .	Rockville . . .	R. D
Lynch, J. Y . . .	Rosedale . . .	R. D	Vanclave, E . . .	Catlin . . .	R. 3
Myers, J. G. L . . .	Bloomingsdale . . .	R. D	Williamson, W. N . . .	Sylvania . . .	R. D
Mater, J. D. . . .	Bridgeton . . .	R. D	Williamson, A. A . . .	Sylvania . . .	R. 3

Regular, 29; Eclectic, 6; Physio-Medical, 1.

Perry County.

Bacon, J. D . . .	Troy . . .	R. 10	LADD, C. W . . .	Cannelton . . .	R. D
Bennett, J. B . . .	Derby . . .	R. 3	Lee, J. H . . .	Rome . . .	R. D
Brucker, C. M . . .	Tell City . . .	R. D	Lomax, Wm . . .	Bristow . . .	R. D
Carnavan, J. W . . .	St. Croix . . .	R. 3	Ripperdam, J. H . . .	Rome . . .	R. 10
Cluthe, Wm . . .	Tell City . . .	R. D	Sanders, Jas . . .	Doolittle's Mills . . .	R. 10
Cox, C. E . . .	Cannelton . . .	R. 10	Schellbase, F. W . . .	Tell City . . .	R. D
Dome, D. C . . .	Troy . . .	R. 10	Speede, — . . .	Branchville . . .	R. D
Evans, F. A . . .	Tell City . . .	R. 10	Spidell, F . . .	Leopald . . .	R. D
Foster, J. C . . .	Uniontown . . .	R. D	Vanwinkle, — . . .	German Ridge . . .	R. 10
Henderson, A. M. D . . .	Rome . . .	R. D	Venneman, R. T . . .	Cannelton . . .	R. D
Howard, W. R . . .	Don Juan . . .	R. 10	Webb, J. R . . .	Troy . . .	R. 3
Hutchason, W. R . . .	Cannelton . . .	R. D	Wedding, M. F . . .	Rome . . .	R. D

Regular, 19; Eclectic, 4; Homeopathic, 1.

Pike County.

Adams, James R . . .	Petersburg . . .	R. D	Hamilton, J. S . . .	Aurthur . . .	R. D
Byers, A. R . . .	Petersburg . . .	R. D	Hunter, Wm. M . . .	Petersburg . . .	R. D
Basinger, Thos. W . . .	Petersburg . . .	R. D	Imel, E. S . . .	Algiers . . .	R. D
Beardsley, J. M . . .	Winslow . . .	R. D	Ireland, Geo. L . . .	Winslow . . .	R. D
Bethel, W. J . . .	Winslow . . .	R. 10	Johnson, L. B . . .	Ottwell . . .	R. D
Blythe, Wm. T . . .	Glezen . . .	R. 3	Kime, J. T . . .	Petersburg . . .	R. D
Bergen, J. W . . .	Petersburg . . .	R. D	Lamar, I. H . . .	Petersburg . . .	R. D
Corn, Nathaniel . . .	Augusta . . .	R. D	Link, W. H . . .	Petersburg . . .	R. D
CLARK, S. R . . .	Ottwell . . .	R. D	Lance, J. T . . .	Spurgeon . . .	R. 3
Coleman, J. W . . .	Union . . .	R. D	McGrew, Wilson . . .	Arshyre . . .	R. 3
Duncan, J. B . . .	Petersburg . . .	R. D	Osborn, Wm. R . . .	Spurgeon . . .	R. D
DeMotte, W. M . . .	Ottwell . . .	R. D	Pagin, Henry . . .	Velpen . . .	R. D
DeTar, David . . .	Winslow . . .	R. 3	Rhodes, A. J . . .	Pikeville . . .	R. 10
Godwine, J. W . . .	Ottwell . . .	R. 10	Smith, John T . . .	Glezen . . .	R. 10
Harrington, A. J . . .	Velpen . . .	R. 10	Stork, John H . . .	Stendal . . .	R. D
Harris, R. W . . .	Algiers . . .	R. D	Thomas, M. C . . .	Petersburg . . .	R. 10
Hilsmeyer, L. H . . .	Stendal . . .	R. D	Ward, J. F . . .	Union . . .	R. D
Hilsmeyer, F. E . . .	Stendal . . .	R. D	Woodward, L. E . . .	Winslow . . .	R. D

Regular, 30; Eclectic, 5; Homeopathic, 1.

Porter County.

Arnold, Geo. W . . .	Wheeler . . .	R. D	Hubbard, R. B . . .	Hebron . . .	R. D
Atkins, Lymon . . .	Valparaiso . . .	R. D	LEATHERMAN, A. P . . .	Valparaiso . . .	R. D
Anderson, Elsie F . . .	Valparaiso . . .	R. D	Loring, D. J . . .	Valparaiso . . .	R. D
Blackstone, John K . . .	Hebron . . .	R. D	McCarthy, John F . . .	Valparaiso . . .	R. D
Blackstone, J. K., Jr . . .	Hebron . . .	R. D	Noland, D. P . . .	Kout . . .	R. D
Beer, H. M . . .	Valparaiso . . .	R. D	Oakes, Omer . . .	Wheeler . . .	R. D
Carson, J. C . . .	Valparaiso . . .	R. D	Palmer, T. W . . .	Valparaiso . . .	R. D
Coates, H. C . . .	Valparaiso . . .	R. D	Pratt, S. R . . .	Hebron . . .	R. D
Carey, H. A . . .	Chesterton . . .	R. D	Ryan, J. A . . .	Valparaiso . . .	R. D
Elliot, H. G . . .	Valparaiso . . .	R. D	Sayles, M. F . . .	Valparaiso . . .	R. 10
Ellis, H. J . . .	Kout . . .	R. D	Vincent, A. W . . .	Valparaiso . . .	R. D
Evans, H. M . . .	Valparaiso . . .	R. D	Wood, O. W . . .	Valparaiso . . .	R. D
Gray, W. H . . .	Chesterton . . .	R. 10	Willing, S. J . . .	Valparaiso . . .	R. D
Green, Hiram . . .	Chesterton . . .	R. 10			

Regular, 17; Eclectic, 7; Homeopathic, 3.

Posey County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Allen, Leroy R. . . .	Cynthiana . . .	E. 3	Lowe, A. A.	St. Wendel . . .	R. D
Bair, Edward	Upton	R. D	Mulchi, W. H. . . .	St. Wendel . . .	R. D
Brydon, J. F.	Griffin	R. 3	Murphy, Edward . .	New Harmony . .	R. D
Cole, John A.	Griffin	R. D	Neal, Daniel	New Harmony . .	R. 10
Crenshaw, W. P. . . .	Farmersville . .	R. D	Neal, Benjamin . . .	New Harmony . .	R. D
Carter, V. R.	Cynthiana . . .	E. D	Ottman, P.	Mt. Vernon . . .	R. D
Creemeens, W. C. . . .	Grafton	E. D	Pearse, S. H.	Mt. Vernon . . .	R. D
Dailey, T. J.	Poseyville . . .	R. 10	Powell, J. W.	Mt. Vernon . . .	R. 3
Dentsdorff, A. B. . . .	Parkers Set'm't R.	R. 10	Peekinpough, G. R. .	Mt. Vernon . . .	R. D
Dixon, R. S.	Mt. Vernon . . .	H. 10	Rawlings, S. C. . . .	New Harmony . .	R. D
Elliott, Cyrenius, Sr.	Poseyville . . .	R. 10	Rutter, John	Cynthiana . . .	E. D
Elliott, Cyrenius, Jr.	Blairsville . . .	R. 3	RAMSEY, D. C. . . .	Mt. Vernon . . .	R. D
Gudgel, James E. . . .	Cynthiana . . .	R. D	Sugg, Henry H. . . .	Mt. Vernon . . .	E. D
Gammon, D. A.	New Harmony . .	R. D	Spencer, G. W. . . .	Mt. Vernon . . .	R. D
Glaze, L. A.	Poseyville . . .	R. D	Spencer, E. V. . . .	Mt. Vernon . . .	R. D
Glaze, J. M.	New Harmony . .	R. D	Smyth, R.	Mt. Vernon . . .	R. D
Gettings, C. C.	Savah	R. 10	Seitz, J. R.	West Franklin . .	R. D
Goodwin, E. J.	Solitude	R. D	Smith, Geo. C.	Cynthiana . . .	R. D
Hall, Thos. J.	Solitude	R. D	Stuart, A. L.	Blairsville . . .	R. D
Holton, W. M.	New Harmony . .	R. D	Williams, J. B. . . .	Grafton	R. 3
Hicks, C.	Caborn	R. D	Wilson, T. W.	New Harmony . .	R. D
Huston, J. C.	Mt. Vernon . . .	k. D	Wilson, J. B.	Stewartsville . .	R. D
Harper, John	Mt. Vernon . . .	R. D	Welborn, G. W. . . .	Stewartsville . .	R. D
Hensler, E. C.	West Franklin . .	R. 3	Welch, Walter	Mt. Vernon . . .	R. D
Henderson, S. C. . . .	St. Philip	R. D	Young, T. B.	Poseyville	R. D
Knowles, Berry H. . .	Griffin	R. D	Carey, W. P.	Hovey	R. 10
Krausgrill, D.	Wadesville . . .	R. D			

Regular, 47; Eclectic, 5; Homeopathic, 1.

Pulaski County.

Agnew, Thomas J. . . .	San Piere. . . .	R. D	Osborn, James	Winamac	R. 10
Buck, Felix G.	Oak	R. 3	Pattison, H. E. . . .	Winamac	R. D
Brown, Stephen I. . . .	Francisville . .	R. D	Pugh, Jno. W.	Lake Sias	P. M. D
Hall, S. Jerome.	Ora	P. M. D	Sharrer, John C. . . .	Francisville . .	R. D
Hoat, P. L.	Monterey	E. D	THOMAS, J. J.	Winamac	R. 10
Jones, H. G.	Medaryville . .	R. D	Thomas, A. McD	Winamac	R. D
Kelsey, W. E.	Monterey	R. 10	Tillett, Jessie A. . . .	Francisville . .	R. D
Kelsey, William	Monterey	R. D	Thompson, W. H. . . .	Winamac	R. D
Kittinger, H.	Winamac	R. D	Thompson, G. W. . . .	Winamac	R. D
Mass, D. F.	Winamac	R. D	Vaughn, Martin	Winamac	R. 3

Regular, 17; Eclectic, 1; Physio-Medical, 2.

Putnam County.

Allen, Chas. A.	New Maysville .	R. D	Mullinix, P.	Cloverdale . . .	R. 3
BENCE, GEO. W.	Greencastle . .	R. D	Moore, A. H.	Clinton Falls . .	R. D
Bastin, J. V.	Belle Union . .	R. D	McChandler, A. S. . .	Roachdale . . .	R. D
Brasier, T. T.	Greencastle . .	R. 3	McCarty, W. F.	Greencastle . .	R. D
Cully, J. F.	Bainbridge . . .	R. D	McClure, S. W.	Cloverdale . . .	R. D
Colliver, R. T.	Roachdale . . .	E. D	Newgent, R. P.	Clinton Falls . .	R. 10
Collins, C. C.	Groveland . . .	R. D	Prichard, W. K. . . .	Cloverdale . . .	R. D
Dooley, R. L.	Russelville . . .	R. 3	Preston, J. L.	Cloverdale . . .	R. D
Denny, Wm. M.	Greencastle . .	R. 10	Poole, Geo. W.	Russelville . . .	R. D
Evans, E. B.	Greencastle . .	R. D	Pierce, H. S.	Morton	R. D
Farver, Geo. W.	Bainbridge . . .	R. D	Robinson, J. S.	Coatsville . . .	R. D
Gillespie, J. F.	Reelsville . . .	R. D	Smyth, G. C.	Greencastle . .	R. D
Hanna, L. M.	Greencastle . .	R. D	Stanley, L.	Fincastle	R. D
Harris, W. C.	Carpentersville .	R. D	Slavens, John	Brick Chapel . .	R. D
Hill, W. D.	Greencastle . .	H. 10	Spurgeon, B. F. . . .	Mt. Meridian . .	R. D
Horn, A. H.	Putnamville . .	R. D	Smith, N. G.	Greencastle . .	E. D
Hawkins, E.	Greencastle . .	R. D	Smythe, A. E.	Greencastle . .	R. D
Hamilton, R. S.	Portland Mills .	R. 10	Throop, Geo. A. . . .	Greencastle . .	R. 10
Harvey, J. W.	Russelville . . .	R. 10	Taylor, Mary J. . . .	Greencastle . .	H. D
Hunt, T.	Greencastle . .	R. D	Taylor, Geo. W. . . .	Greencastle . .	H. 10
Knight, J. M.	Greencastle . .	E. D	Towey, J. T.	Russelville . . .	R. D
Leatherman, J. R. . . .	Greencastle . .	R. D	Terrell, W. H.	Fillmore	R. D
Lammers, F. H.	Greencastle . .	R. D	Wood, N. S.	Roachdale . . .	R. D

Regular, 40; Eclectic, 3; Homeopathic, 3.

Randolph County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Abel, Oscar E . . .	Winchester.	R. D	Hunt, Henry C . . .	Trenton	E. 3
Alexander, R. P . .	Winchester.	P-M. 10	Keller, Frank G . .	Spartansburg . .	R. D
Alexander, P. B . .	Winchester.	P-M. 10	Kelley, Clifton M .	Winchester . . .	R. D
Botkin, John W . .	Unionport . . .	E. 10	Markle, John E . .	Winchester . . .	R. D
Botkin, Thomas W .	Unionport . . .	E. 3	Markle, Grant C . .	Winchester . . .	R. D
Bruce, George W . .	Winchester . . .	R. 10	Milligan, Charles E .	Winchester . P-M.	D
Bosworth, Richard .	Winchester . . .	R. D	Moroney, James H .	Carlos City . . .	R. D
Berry, John S . . .	Spartansburg . .	R. D	Mills, Cascius C . .	Losantville . . .	R. D
Blair, James S . . .	Lynn	R. D	McNaul, Charles . .	Winchester . . .	R. D
Cox, Cyrus R . . .	Lynn	R. D	McFarland Norman .	New Pittsburg . .	E. 10
Chenoweth, John T .	Winchester . . .	R. D	Nixon, John	Farmland	R. D
Chenoweth, Nelson T.	Windsor	R. D	Noffsinger, Henry .	Union City . . .	E. D
CHENOWETH, F. A .	Winchester . . .	R. D	Owens, John K . . .	Harrisville . . .	R. 3
Commons, William .	Union City . . .	R. D	Purcell, John . . .	Deerfield	R. D
Carter, D. M . . .	Modoc	R. D	Proctor, J. A . . .	Union City . . .	P-M. 10
Carver, James M . .	Winchester . . .	R. 10	Rogers, A. G . . .	Parker	R. D
Clark, John M . . .	Modoc	R. 10	Rickard, William A .	New Pittsburg . .	E. D
Davis, Lewis N . . .	Farmland	R. D	Kemmell, Sylvia . .	Winchester . P-M.	10
Evans, Caleb S . . .	Union City . . .	R. D	Ruby, Samuel B . . .	Union City . . .	R. 3
Evans, Joseph J . .	Winchester . . .	R. 10	Reynard, Granville .	Union City . . .	R. D
Frederick, George W.	Ridgeville . . .	R. D	Reynard, Edward G .	Union City . . .	R. D
Frederick, John E .	Ridgeville . . .	R. D	Reeves, John L . . .	Union City . . .	E. D
Farquhar, Allen H .	Ridgeville . . .	R. D	Simmons, William D .	Union City . . .	E. D
Franks, Hamilton P .	Losantville . . .	R. D	Shoemaker, Wm. J .	Ridgeville . . .	R. 10
Fager, Charles M . .	Fairview	R. 10	Spitler, Charles E .	Saratoga	R. D
Gustin, Francis M .	Union City . . .	H. D	Smith, Calvin . . .	Farmland	E. D
Huddleston, Albert F.	Winchester . . .	H. D	Thompson, George W.	Union City . . .	E. 10
Harrison, Harlan . .	Union City . . .	E. D	Thompson, Val . . .	Union City . . .	E. 10
Hiatt, John A . . .	Ridgeville . . .	E. D	Tisor, William R . .	Rural	R. 10
Hiatt, C. C	Ridgeville . . .	E. D	Welbourne, E. L . .	Union City . . .	E. D
Hetzler, William W .	Arba	R. D	Welbourne, Ocolosa C.	Union City . . .	E. D
Heiner, John	Arba	R. D	Yergin, H. H . . .	Union City . . .	R. D

Regular, 41; Eclectic, 16; Physio-Medical, 5; Homeopathic, 2.

Ripley County.

Abbott, Maud . . .	Milan	E. D	Miller, A. G	Elrod	E. D
Anderson, James . .	Versailles . . .	E. D	Newforth, Christian	Sunman	R. D
Brown, C. M	Marion	R. D	Ratons, George E . .	Milan	R. D
Clarke, Freeman . .	Delaware . . .	R. D	OLMSTED, R. T . . .	Versailles . . .	R. D
Cass, C. H	Holton	R. D	Robinson, John M .	Versailles . . .	R. D
Davis, James R . . .	Batesville . . .	R. D	Roberts, Jeremiah .	Holton	R. 3
Freeman, E. D . . .	Osgood	R. D	Redion, Daniel M .	Pierceville . . .	R. D
Freland, John P . .	Sunman	R. D	Ratcliff, J. T	Morris	R. D
Hicks, John C . . .	Napoleon	P-M. D	Swezey, John M . .	Cross Plains . .	E. 10
Hess, John N	Marion	R. D	Swezey, Frank C . .	Cross Plains . .	E. D
Helbert, Wm. M . .	Elrod	R. D	Schlosser, Geo. F . .	Batesville . . .	R. 10
Jones, John G . . .	Versailles . . .	R. D	Townsend, S. B . . .	Osgood	R. D
Joseph, Alexander .	Osgood	R. D	Townsend, R. C . .	Osgood	R. D
Kretzmer, I. M . . .	Batesville . . .	R. D	Vincent, Edwin B . .	Sunman	R. D
Lamb, James F . . .	Delaware . . .	E. D	Ziteke, Joseph . . .	Batesville . . .	R. D
Miller, R. H	Cross Plains . .	R. D			

Regular, 24; Eclectic, 6; Physio-Medical, 1.

Rush County.

Arnold, John . . .	Rushville . . .	R. D	McGee, W. N	Rushville	R. D
Behr, Edward . . .	Rushville . . .	E. D	McGaughey, John . .	Rushville	R. D
Bogart, H. J	Carthage	R. 10	McGee, Omer	Rushville	H. D
Barnum, W. E . . .	Manilla	R. 10	Linn, H. G	Manilla	R. D
Crippen, E. H . . .	Milroy	E. 10	Louden, L. A	Arlington	R. D
Coffin, J. S	Carthage	E. D	Or, J. P	Rushwood	R. D
Dillon, J. C	Rushville . . .	R. D	Pugh, W. A	Rushville	R. D
Dillion, O. P	Rushville . . .	R. D	Parson, Chas. H . .	Rushville	R. D
Dean, D. H	Rushville . . .	H. D	Porter, W. J	Carthage	E. D
Elliott, H. H . . .	Glenwood . . .	E. 3	Ruckles, L. H	Arlington	E. 10
GREEN, LOT	Rushville . . .	R. D	Rea, Chas. L. H . . .	Falmouth	R. D
Green, Thos. B . . .	Arlington . . .	R. D	Sexton, J. C	Rushville	R. D
Gilbert, Chas. H . .	Rushville . . .	H. D	Smith, W. H	Rushville	R. D
Gibson, M. E	Rushville . . .	E. 10	Smith, W. C	Rushville	R. D
Gordon, W. S	Raleigh	P-M. D	Sparks, J. B	Carthage	R. D
Hackleman, F. G . .	Rushville . . .	R. D	Spurrier, John H . .	Rushville	R. D
Hargrove, W. S . . .	New Salem . .	R. D	Smullen, C. L	Raleigh	R. D
Inlow, J. J	Manilla	R. 10	Surface, O. B	Henderson	R. 3
Jones, Geo. B	Mays	R. D	Tevis, L. W	Moscow	R. 10
Mearris, A. J	Carthage	R. D	Wooten, E. I	Homer	R. D
Moffett, John . . .	Rushville . . .	R. D			

Regular, 31; Eclectic, 5; Homeopathic, 3; Physio-Medical, 1.

Scott County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Green, W. E.	Lexington	E. D	Tamag, H.	Austin	R. D
Warmouth, G. W.	Scottsburgh	R. D	Houglund, M. E. M.	Vienna	E. 10
WATSON, JOHN M.	Scottsburgh	R. D	Biery, T. E.	Scottsburgh	R. D
Smith, L. H.	Lexington	R. D	Blocher, J. B.	Blocher.	E. D
Sarver, John A.	New Frankfort.	R. D	Martin, L.	Scottsburgh	E. D
Casey, Henry R.	Austin	R. D	Rogers, S. M.	Scottsburgh	E. 10

Regular, 8; Eclectic, 4.

Shelby County.

Abernathy, A. A.	Morristown.	E. 10	Lowden, John	Carrollton	E. D
Adams, Jas. M.	Noah	R. 10	Leech, Elliott W.	Shelbyville	R. D
Bowlbey, Joseph	Noah	R. D	McCray, R. S.	Morristown	R. D
Baylor, W. K.	Sulphur Hill	10	Maze, Thos. B.	Fairland	10
Bentley, W. R.	Morristown	R. D	McFadden, Wm. G.	Shelbyville	R. D
Black, Frank B.	Bengal	E. D	Parrish, J. W.	Shelbyville	E. D
Carney, John	Ray's Crossing	R. D	Pettigrew, D. A.	Fiat Rock	R. D
Connally, Henry M.	Flat Rock	R. D	Perry, John	Shelbyville	R. D
Carter, James	Gwynneville	R. D	Post, Margaret	Shelbyville	10
Coleman Emma E.	Shelbyville	E. D	Pierson, W. M.	Fountaintown	R. D
Drake, Morris	Shelbyville	R. D	Rubush, Thos. R.	London.	R. D
Dearmin, John H.	Brookfield	R. D	Randolph, D. F.	Waldron	R. D
Ford, W. M.	Mt. Auburn	R. D	Rucker, J. W.	Shelbyville	R. D
Furney, Wm. C.	Morristown	R. D	Stewart, Jas. K.	Fairland	R. D
Floyd, R. M.	Shelbyville	R. D	Smith, Hezekiah	Fenns.	10
Fleming, Geo. W.	Shelbyville	R. D	Stewart, John B.	Marietta	R. 10
Green, Jas. W.	Shelbyville	R. D	Sanford, Jas H.	Shelbyville	R. 3
Green, Wm. F.	Shelbyville	R. D	Strickler, S. L.	Boggs town	R. D
Hamilton, R. G.	Marietta	R. D	Snider, John W.	Fairland	R. D
Hess, M. M.	Morristown	R. D	Shrout, Wm. T.	Blue Ridge	E. 10
Inlow, I. W.	Blue Ridge	R. 10	TREES, I. W.	Smithland	R. D
Jones, T. S.	Shelbyville	R. D	Trees, J. R.	London.	R. D
Jenkins, J. R.	Shelbyville	R. D	Taylor, John F.	Shelbyville	R. D
Keeling, J. E.	Sulphur Hill	R. D	Tindall, C. A.	Shelbyville	E. D
Kennedy, S. A.	Shelbyville	R. D	Tull, Edward N.	Fairland	R. D
Kennedy, Thos. C.	Shelbyville	R. D	Wolf, Jacob G.	Morristown	R. D
Kennedy, Sam	Shelbyville	R. D	Winter, Gustav G.	Shelbyville	H. 10
Lucas, J. N.	Shelbyville	H. D	Washburn, R. R.	Waldron	R. D

Regular, 42; Eclectic, 7; Homeopathic, 2; not reported, 5.

Spencer County.

Anderson, E. M.	Huff	R. D	Jolly, J. C.	Lake	R. D
Allenbaugh, E. E.	Hatfield	R. D	John, B. B.	Gentryville	E. 10
Beeler, W. R.	Rockport	N. R. 10	Killian, J. L.	Eureka	R. 10
Bryant, Jas. H.	Gentryville	R. 10	Lucas, L. B.	Buffaloille	E. D
BRYANT, JAS. B.	Gentryville	R. D	Logdon, W. T.	Eureka	R. D
Bryant, W. S.	Dale	R. D	Lee, H. A.	Newtonville	R. D
Buxton, J. D.	Rockport	E. D	Lang, Jacob	Lake	H. D
Butler, J. M.	Troy, Perry Co.	E. D	Lamar, H. L.	Eureka	H. D
Critchfield, J. S.	Lamar	E. D	Myles, J. M.	Eureka	R. D
Dalley, J. M.	Rockport	R. D	Maslowsky, Felix	Mariah Hill.	E. D
Davis, J. S.	Newtonville	N. R. —	McCoy, L. H.	Lake	R. D
Dyer, A. S.	Huffman	N. R. 10	McCoy, Geo. W.	Chrisney	R. D
Dunlevy, G. C.	Rockport	H. D	McKasson, J. W.	Gentryville	R. 10
Ehrman, E. D.	Rockport	H. 10	Schweitzer, J. J.	Santa Clause	R. 3
Felix, C. W.	Chrisney	R. D	Schriefer, John	St. Meinrad.	R. 3
Goble, D. S.	Buffaloille	R. D	Turpin, Jas.	Newtonville	E. D
Gatewood, T. H.	Midway	R. D	Wright, Thomas	Midway	R. D
Hackelman, F. M.	Rockport	E. D	White, J. T.	Grandview	R. 3
Harrison, E. P.	Rockport	E. 10	White, Arthur	Rockport	R. D
Hunter, S. W.	Chrisney	R. 3	Williams, Wm. H.	Dale	R. D
Hammond, D. M.	Grandview	R. D	Williams, J. S.	Dale.	E. D
Jones, Wm. M.	Gentryville	R. D	Wheeler, Jno. T.	Rockport	E. D
James, J. B.	Buffaloille	E. 10			

Regular, 26; Eclectic, 12; Homeopathic, 4; not reported, 3.

Starke County.

Abner, John R.	Grovertown	P.-M. D	Glazebrook, L. D.	Knox	R. 10
Agnew, Thomas J.	San Pier	R. D	Henderson, Alex. H.	Knox	R. 10
BUNER, M. C.	Knox	R. 3	Kelley, William M.	Knox	R. D
Boner, Samuel S.	Knox	R. 10	Noland, James F.	North Judson.	R. D
Coffin, Ellen	Davis	N. R. 10	Wright, M. R.	Knox	E. 10

Regular, 7; Eclectic, 1; Physio-Medical, 1; not reported, 1.

Steuben County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Abbett, Lyman, . . .	Fremont . . .	R. D	McNabb, T. B. . . .	Fremont . . .	R. D
Burgess, T. E. . . .	Ashley . . .	R. D	Nichols, H. B. . . .	Flint . . .	R. D
Cameron, John F. . .	Hamilton . . .	R. D	Ransburg, M. V. . .	Salem Centre . .	R. D
Dolph, C. M.	Pleasant Lake . .	R. D	Stauffer, E. R. . . .	Fremont . . .	R. D
Dunnigan, D.	Fremont . . .	R. D	Sherman, F.	Jamestown . . .	R. D
Fuller, S. H.	Pleasant Lake . .	R. D	Sherron, W. E. . . .	Salem Centre . .	E. D
Greene, D.	Pleasant Lake . .	R. D	Smith, Dr.	Angola . . .	H. D
Goodale, C. W. . . .	Metz . . .	R. D	Sanborn, P. P. . . .	Angola . . .	H. D
Gibbs, O. H.	Hamilton . . .	E. D	Taylor, E. A.	York Centre . .	R. D
Hamilton, Frank . . .	Hudson . . .	R. D	Wood, T. F.	Angola . . .	R. D
Keesler, Geo.	Orland . . .	R. 10	WOOD, H. D.	Angola . . .	R. D
Kimmel, A. J.	Hudson . . .	R. D	Waller, W. H.	Angola . . .	R. D
Lease, E. R.	Angola . . .	H. 10	Williams, T. B. . . .	Angola . . .	R. D
Leasure, Lida	Angola . . .	R. D	Wilkinson, J. J. . . .	Orland . . .	R. 10
Lane, W. H.	Angola . . .	R. D	Wallace, J. F.	Orland . . .	R. D

Regular, 24; Eclectic, 2; Homeopathic, 3; not reported, 1.

St. Joseph County.

Applegate, Chas. H. .	South Bend . .	R. D	Myers, C. H.	South Bend . .	H. D
Arlington, Jas. W. . .	Walkerton . .	R. D	MONTGOMERY, H. T. .	South Bend . .	R. D
Borough, John	Mishawaka . .	H. D	Moore, John	Lakeville . . .	R. 10
Brown, J. R.	Sumption's P. .	R. 10	Moore, Rob't	Lakeville . . .	R. 10
Berteling, John R. . .	South Bend . .	R. D	McDonald, Thos. T. .	New Carlisle . .	R. 10
Butterworth, C. M. . .	South Bend . .	R. D	Miller, A. G.	South Bend . .	R. 3
Burkett, W. W.	Granger . . .	R. 10	Mitchell, H. F. . . .	Lakeville . . .	R. D
Boyd, Snee Henry . . .	South Bend . .	R. D	Mitchell, Chas. F. . .	South Bend . .	R. D
Barber, A. E.	Mishawaka . .	R. D	Miller, Rob't. S. . . .	South Bend . .	R. D
Campbell, A. S.	North Liberty .	R. 10	McAllister, E. W. . .	South Bend . .	R. D
Cassidy, John	South Bend . .	R. D	McCool, A. W.	Walkerton . . .	R. 10
Chaffee, W. D.	South Bend . .	H. D	Norton, D. H.	South Bend . .	R. 10
Daugherty, C. A. . . .	South Bend . .	R. D	Osborn, G. A.	South Bend . .	R. D
Drallinger, E. M. . . .	South Bend . .	E. D	Osborn, Margaret . .	South Bend . .	R. 10
Davis, J. H.	New Carlisle .	R. D	Pierce, Wm. A.	Oceals . . .	R. 10
Dugdale, R. B.	North Liberty .	R. D	Partridge	South Bend . .	H. D
Eudley, J. F.	Walkerton . .	R. D	Pagan, Daniel	South Bend . .	R. 10
Elid, L.	South Bend . .	R. 10	Rupp, P. E.	South Bend . .	R. 10
Eastman, F. P.	South Bend . .	R. D	Reece, James N. . . .	Walkerton . . .	R. D
Fink, H. A.	South Bend . .	H. D	Rennal, C. O.	South Bend . .	R. D
Green, Jas. B.	Mishawaka . .	R. 10	Sawyer, F. M.	South Bend . .	R. D
Grimes, Jas. F.	Mishawaka . .	E. 10	Stockwell, S. F. . . .	South Bend . .	R. D
Grimes, Jno. H.	Mishawaka . .	E. D	Shafer, A. F.	South Bend . .	R. D
Godfrey, Mrs. J. B. . .	South Bend . .	H. D	Stine, R. L.	South Bend . .	H. D
Hunsinger, A.	Mishawaka . .	H. D	Starbuck, S. H. . . .	South Bend . .	H. D
Harris, Rob't.	South Bend . .	E. 10	Stonebraker, P. O. . .	South Bend . .	R. D
Hanford, Wm. H. . . .	South Bend . .	H. D	Thope, A. L.	Mishawaka . .	R. D
Hill, J. W.	South Bend . .	R. 10	Todd, S.	Woodland . . .	R. D
Jay, M.	South Bend . .	R. D	Thurston, C. M. . . .	New Carlisle . .	R. D
Kilmer, S. L.	South Bend . .	R. D	Varier, J. A.	North Liberty .	E. D
Kemble, Mrs. L.	South Bend . .	R. 10	Van Riper, A. H. . . .	New Carlisle . .	R. D
Lyon, T. B.	South Bend . .	R. D	Wickham, W. A. R. . .	South Bend . .	E. D
Lent, E. J.	Lakeville . . .	R. D	Woodworth, H. A. . .	Walkerton . . .	R. 3
Lut Juni (Chinaman) .	South Bend . .	R. D			

Regular, 52; Eclectic, 7; Homeopathic, 8.

Sullivan County.

Bennett, J. H.	Farmersburgh .	E. D	Lisman, S. J.	New Lebanon . .	R. D
Briggs, C. F.	Sullivan . . .	R. D	Lowder, C. M.	Dugger . . .	R. D
Brown, N. S.	Dugger . . .	R. 10	Mayfield, T. B. . . .	Sullivan . . .	R. D
Crowder, R. H.	Sullivan . . .	R. D	Neal, E. M.	Paxton . . .	R. D
Crowley, J. B.	Sullivan . . .	E. D	McClung, S. Y.	Pleasantville . .	R. D
Cushman, A.	Graysville . .	R. D	Osborn, S. J.	Shelburn . . .	R. D
Delashmut, V. E. . . .	Shelburn . . .	R. D	Phillips, J. L.	Pleasantville . .	R. 3
Denison, E. D.	Carlisle . . .	R. 10	Pirch, G. W.	Carlisle . . .	R. D
Durham, J. L.	Graysville . .	R. D	Plew, G. W.	Hymers . . .	R. D
FREE MAN, JOS.	Sullivan . . .	R. D	Thompson, J. J. . . .	Sullivan . . .	R. 3
Hinkle, J. E.	Sullivan . . .	H. D	Thompson, W. N. . . .	Sullivan . . .	R. D
Harper, H. E.	Merom . . .	R. D	Thralls, R. T.	Hymers . . .	R. D
Higbee, G. W.	Sullivan . . .	H. D	Vandever, R. H. . . .	Farmersburgh .	R. D
Higbee, J. L.	Sullivan . . .	H. D	Weir, S. D.	Sullivan . . .	R. D
Jenkins, R. L.	Carlisle . . .	R. 3	Whalen, D. M.	Carlisle . . .	R. 10
Kennedy, Thomas	Farmersburgh .	R. D	Wilson, S. R.	Fairbanks . . .	R. D
Lisman, J. W.	Buel City . . .	R. D	Young, J. N.	Carlisle . . .	R. D
Lisman, W. A.	Carlisle . . .	R. D	Yeager, E. J.	Graysville . . .	E. D

Regular, 31; Eclectic, 3; Homeopathic, 2.

Switzerland County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Cheever, E. M. . . .	Queous Grove . . .	R. 10	Olcott, W. A.	Patriot	R. D
Clark, R. E.	Markland	R. D	Price, Oliver A. . . .	Florence	R. D
Copeland, R. M. . . .	Bennington	R. D	Pryor, James A. . . .	Patriot	R. D
Culbertson, Scott . .	Moorefield	R. D	Rous, Hannah C. . . .	Vevay	R. D
Craig, Albert G. . . .	Vevay	R. D	Sage, P. S.	Vevay	R. 10
Dalgilevisk, H. T. . .	Vevay	R. D	Shadday, John H. . .	Vevay	R. D
Elfers, John	Sugar Branch	R. D	Simpson, R. G.	E. Enterprise	R. D
Greenleaf, H. A. . . .	Markland	R. D	Smith, J. W.	Vevay	H. D
Hayden, David N. . . .	Mt. Sterling	R. 3	Vanosdol, J. W. . . .	Allensville	R. D
Jamison, R. A.	Patriot	R. D	VAN PELT, GEO. W. . .	Vevay	R. D
Langsdale, J. M. W. . .	Florence	R. D	Woollen, Levin J. . .	Vevay	R. D
McMillen, Wm.	Sugar Branch	R. D	Walden, James B. . .	Mt. Sterling	R. D

Regular, 22; Eclectic, 1; Homeopathic, 1.

Tippecanoe County.

Ackerman, August C . .	Lafayette	H. D	Nivison, Alice C . . .	Lafayette	H. D
Anderson, Joseph H . .	Colburn	R. D	O'Ferrali, Robert M . .	Lafayette	R. D
Baker, Joseph H	Lafayette	R. D	Ogborn, Job O	Lafayette	E. 10
Baugh, Samuel L	Farmers' Inst.	R. D	Peters, Walter H	Lafayette	R. D
Beasley, Geo. F	Lafayette	R. D	Potel, Christian	Lafayette	R. D
Boyd, Benjamin H . . .	Lafayette	R. D	Powers, Ed. D	Lafayette	R. D
Brown, W. W. C	Lafayette	R. 10	Pyke, Albert D	Romney	R. D
Burns, Geo. W	No. 10	E. 10	Quick, Wm. R	Colburn	R. D
Campbell, Wm. S	West Point	R. D	Riddle, H. D	Battle Ground	R. D
Charles, Robt. E	West Point	R. 10	Robinson, Robert D . .	W. Lafayette	R. D
Charter, John H	Buck Creek	R. D	Schaible, Emil	Lafayette	R. D
Crider, George W	Lafayette	R. D	Seawright, Samuel R . .	Lafayette	R. D
Crouse, J. H	Dayton	R. D	Shill, Charles W	Lafayette	R. D
Drenhardt, Michael . .	Lafayette	R. 10	Simison, John	Romney	R. 10
Dunbar, James	Battle Ground	R. 10	Simison, J. Frank . . .	Romney	R. D
Fickle, James M	Stockwell	E. D	Smith, John M	Lafayette	H. D
Fox, Stiles R	Lafayette	R. 3	Snyder, Leander	Lafayette	R. 10
Guernsey, F. F	Stockwell	R. D	Swisher, Francis W . .	Clarks Hill	P. M. D
Harbaugh, A. C	Octagon	R. D	Taylor, Wm. R	Clarks Hill	R. D
Hill, Wm. H	Dayton	R. D	Tea, Roger S	Battle Ground	R. D
Hillis, James D	Lafayette	R. D	THR'KMORTON, G. K . .	Lafayette	R. D
Hines, Fred. T	W. Lafayette	R. 10	Tilson, Washburn . . .	Lafayette	H. D
Hopper, Milton S	Lafayette	R. D	Vinnedge, Wm. W . . .	Lafayette	R. D
Hupe, Carl	Lafayette	R. D	Walker, Wm. S	Lafayette	R. D
Irwin, Luther Martin . .	Lafayette	R. D	Washburn, G. W	Lafayette	E. D
Keiper, George F	Lafayette	R. D	Washburn, S. S	Lafayette	R. 10
Kirkpatrick, G. W . . .	Lafayette	R. 10	Webster, John C	Lafayette	R. D
Koons, Jeremiah P . . .	Lafayette	E. 10	Wells, Albert A	Lafayette	R. D
Littell, John V	Lafayette	R. D	Westfall, Arthur B . . .	Elston	R. D
Moffitt, Wm. Robt . . .	W. Lafayette	R. D	Wetherill, R. B	Lafayette	R. D
Motter, Thomas S	Dayton	R. 10	Yeager, J. Wm	Odell	R. D
Neabit, Wm. S	Monitor	R. D	Yeakel, David T	Lafayette	R. D

Regular, 54; Eclectic, 5; Homeopathic, 4; Physio-Medical, 1.

Tipton County.

Axtell, Wm. H	Tipton	R. D	Newcomer, M. V. B . . .	Tipton	R. D
Amos, Edward M	Kempton	R. D	Pitzer, Andrew B	Tipton	R. D
Austin, Winsor	Windfall	R. 10	Ploushe, M. L	Goldsmith	R. D
Cochran, Thos. C	Sharpville	R. D	Repp, Geo. R	Tipton	R. D
Collins, Geo. M	Tipton	R. D	Rubush, D. P	Sharpville	R. 3
Cooper, John	Groomsville P. M. D .	R. 10	Read, Horace G	Tipton	R. D
Doan, Nathan W	New Lancaster	R. 10	Ross, L. N	Ekin	E. 10
DICKEY, A. S	Tipton	R. D	Rhoads, Anna E	Tipton	R. 10
Downing, Samuel G . . .	Hobbs	R. D	Stevenson, Jos. A	Kempton	R. 3
Goar, Chas. S	Goldsmith	R. D	Spitzmesser, John L . . .	Windfall	E. 10
Grove, Jasper M	Tipton	R. 10	Somers, Jos. A	Nevada	R. 10
Gossett, Lucy A	Kempton	E. D	Tressider, James T . . .	Tipton	N. R. D
Hilldrup, J. R	Windfall	P. M. D	Tressider, Sarah E . . .	Tipton	N. R. D
Huron, Willis B	Tipton	H. D	Vickey, M. V. B	Tipton	R. D
Jessup, John T	Curtisville	R. D	Whelchell, Thomas C . .	Goldsmith	R. 10
King, Frank B	Windfall	R. D	Wood, Geo. C	Tipton	R. D
Lindsay, Jas. P	Sharpville	R. 10	Woodruff, I. H	Tipton	R. D
McCreary, Oliver P . . .	Windfall	R. 3			

Regular, 25; Eclectic, 3; Homeopathic, 1; Physio-Medical, 2; not reported, 3.

Union County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Fosdick, A. C.	Liberty	R. 10	Sigler, Geo. A.	Liberty	R. D
Hawley, A. D.	College Cor., O	R. D	Shriner, W. W.	Liberty	E. 10
Kell, S. D.	Liberty	R. 10	Squires, A. E.	College Cor., O	—
Moore, H. H.	Liberty	R. D	Smith, J. A.	Brownsville	R. 13
Morris, J. E.	Liberty	R. D	THOMPSON, E. C.	Liberty	H. D
Pigman, G.	Liberty	R. D	Williams, O. N.	Lotus	H. 10

Regular, 8; Eclectic, 1; Homeopathic, 2; not reported, 1.

Vanderburgh County.

Achilles, F. W.	Evansville	R. D	McCoy, Benj. F.	Evansville	R. D
Bacon, Chas. P.	Evansville	R. D	McCoy, P. Y.	Evansville	R. D
Begley, E. W.	Inglesfield.	R. D	McMahon, C. Agnes	Evansville	R. D
Bennett, A. T.	Evansville	R. D	McGraw, G. W.	Evansville	R. 10
Biddle, Edgar D.	Evansville	R. D	Macer, Thos.	Evansville	E. D
Binkley, John T.	Evansville	R. D	Maghee, Wm. H.	Evansville	R. D
Betz, L. B.	Evansville	R. D	Minton, J. C.	McCutchanville	R. D
Blount, Jos. F.	Evansville	R. D	Moutoux, C. G. R.	Kasson	R. D
Bray, M. J.	Evansville	R. D	Moore, David A.	Evansville	R. 3
Brose, L. D.	Evansville	R. D	Muehlhausen, M.	Evansville	R. D
Bryan, Anth. H.	Evansville	R. D	Norman, Seaton	Evansville	R. D
Bryan, Tony L.	Evansville	R. D	Owen, A. M.	Evansville	R. D
Buckner, Geo. W.	Evansville	E. D	Owen, Jno. E.	Evansville	R. D
Busse, Edw. P.	Evansville	R. D	Oehlmann, Chas.	St. Joseph	R. D
Carrington, P. M.	Evansville	R. D	Phipps, Jno. M.	Evansville	—
Carter, E. L.	Evansville	R. D	Pirnat, Jno. S.	Evansville	R. —
Campton, Fred. S.	Evansville	R. D	Pollard, W. S.	Evansville	R. D
Campton, J. W.	Evansville	R. D	Powell, Thos. E.	Evansville	R. D
Cleveland, W. F.	Evansville	R. D	Pritchett, W. S.	Evansville	R. D
Clippingier, W.	McCutchanville	R. D	Ralston, W. G.	Evansville	R. D
Curlew, Rufus M.	Evansville	R. D	Reavis, W. J.	Evansville	R. D
Cosby, Geo. P.	Evansville	R. D	Rose, W. D.	Evansville	R. D
Cox, D. A.	Evansville	R. D	Rucker, Thos. H.	Evansville	R. D
Cluthe, C. F.	Evansville	R. D	Ruark, S.	Evansville	R. D
Davis, F. L.	Evansville	H. D	Sawyer, F. W.	Evansville	R. D
Day, B. J.	Evansville	R. D	Schultz, Theo.	Evansville	H. 10
Dixon, Henry T.	Evansville	R. D	Schuyler, P. L.	Evansville	R. D
DuBois, G. M.	Evansville	R. D	Siefert, A. H. H.	Evansville	R. D
Fritsch, Ludwig	Evansville	R. 10	Smith, H. T.	Evansville	R. D
Fritsch, W. A.	Evansville	R. D	Snyder, Katherine	Evansville	R. D
Graham, J. J.	Evansville	E. 10	Suiter, Wilhelmina	Evansville	R. 10
Gilbert, W. H.	Evansville	R. D	Thomas, A. J.	Evansville	R. D
Glover, Jno. F.	Evansville	R. D	Taylor, T. H.	Evansville	H. D
Green, W. S.	Evansville	R. —	Tyrrell, C. C.	Evansville	H. D
Gumaer, C. H.	Evansville	R. D	Teddrington, Flora	Evansville	R. 10
Hartloff, Rich.	Evansville	R. D	Varner, G. W.	Evansville	R. D
Hayden, A. M.	Evansville	R. D	Viehe, Casper H.	Evansville	H. D
Hayward, L. T.	Evansville	R. D	Vincent, S. T.	Evansville	R. D
Herr, L. S.	Evansville	H. D	Walker, Edwin.	Evansville	R. D
Hodson, Geo. P.	Evansville	R. D	Weever, J. B.	Evansville	R. D
Hooker, H. H.	Oakdam	R. 10	Wertz, Tolivar	Evansville	R. D
Hensler, Ernst	Evansville	R. D	Witting, A. P.	St. Joseph	R. D
Jay, J. P.	Evansville	R. D	Whistler, L. M.	Evansville	H. D
Jacobsohn, Jos.	Evansville	R. D	Wilton, Issiah	Evansville	R. D
KERTH, JACOB H.	Evansville	R. D	Worsham, Ludson	Evansville	R. D
Knapp, Chas.	Evansville	R. D	Walters, H. J.	McCutchanville	R. D
Laral, W. J.	Evansville	R. D	Young, G. M.	Evansville	R. D
Linthicum, Edw.	Evansville	R. D	Zahring, Chas. F.	Evansville	R. D
McClurkin, J. C. C.	Evansville	R. D			

Regular, 86; Eclectic, 3; Homeopathic, 7.

Vermillion County.

Aikman, Edgar A.	Clinton	R. D	Mack, Erastus	Hillsdale	E. 10
Bogart, John H.	Clinton	R. D	Nebeker, Henry	Clinton	R. D
Barnes, James A.	Gessie	R. D	Newton, G. O.	Dana	R. D
Flaucher, E. A.	Cayuga	R. D	Patterson, W. P.	Toronto	R. 3
HALL, M. L.	Newport	R. D	Pinson, James A.	Clinton	R. D
Hall, W. I.	Gessie	R. D	Sanders, F. E.	Perrysville	R. D
Harrison, John C.	Hillsdale	R. 10	Shepard, Hiram	Dana	R. D
Hood, Thomas C.	Dana	R. D	Shepard, Lewis	Quaker Hill	R. D
Johnson, David B.	Perrysville	R. 10	Smith, Elmer M.	Cayuga	R. D
Keyes, Otis M.	Dana	R. D	White, Charles M.	Clinton	R. D
Kindermann, Alex.	Eugene	R. D	Wallace, James	Newport	R. D
Lonsdale, Thos. N.	St. Bernice	R. D	Webb, James B.	Perrysville	R. 10

Regular, 22; Eclectic, 2.

Vigo County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Armstrong, W. P.	Terre Haute	R. D	Melton, S. B.	Burnett	R. 3
Askern, Cort F.	Terre Haute	R. D	Moorehead, T. W.	Terre Haute	R. D
Bell, Will E.	Terre Haute	R. D	Mattox, W. R.	Terre Haute	R. D
Baldridge, Jno. H.	Terre Haute	E. D	Moore, W.	Terre Haute	R. D
Bail, C. F.	Terre Haute	R. D	Mann, H. D.	Terre Haute	R. D
Baker, W. H.	Terre Haute	H. D	Mason, C. A.	Terre Haute	R. D
Brenette, Samuel L.	Lewis	R. D	Morgan, J. H.	New Goshen	R. D
Brock, Leonidas	Fontanet	R. D	Moore, J. A.	Prairie Creek	R. D
Belt, Richard	Maxville	E. D	McCorkle, T. H.	Ellsworth	R. D
Brown, Theo. F.	Sanford	R. D	McClain, L.	Terre Haute	R. D
Bennett, Stephen N.	New Goshen	E. D	McLaughlin, J.	Seelyville	R. D
Bail, Lawrence S.	Prairieton	E. D	McJohnston, A. D.	Pimento	R. D
Braker, J. J.	Coal Bluff	—	Mebergall, J. W.	Prairie Creek	R. 10
Brunker, James W.	Riley	R. D	Ogle, J. W.	Prairieton	R. D
Crawley, Thos. N.	Terre Haute	R. D	Preston, S. C.	Terre Haute	R. D
Crape, G. W.	Terre Haute	R. D	Pike, L.	Terre Haute	E. 10
Crape, J. R.	Terre Haute	R. D	Pence, Allen	Terre Haute	E. 10
Caldwell, H. H.	Terre Haute	R. D	Pierson, A. J.	New Goshen	R. D
Cavens, R. W.	Terre Haute	R. D	Price, W. S.	Atherton	R. 3
Carson, J. C.	Middleton	R. 3	Pierson, Jas. A.	New Goshen	R. D
Collins, W. O.	Pimento	R. D	Rowe, Thos. C.	Coal Bluff	R. D
Carson, L. E.	Prairieton	R. D	Roberts, W. H.	Terre Haute	R. D
Dorr, J. E.	Terre Haute	R. D	Rice, S. M.	Terre Haute	R. D
Dooley, R. L.	Atherton	R. 3	Richardson, S. C.	Terre Haute	P. M. D
Dolson, J. H.	Pimento	R. 10	Russell, C. W.	Riley	R. D
Drake, T. G.	Prairieton	R. D	Swafford, B. F.	Terre Haute	R. D
Drake, T. A.	Prairieton	R. D	SPAIN, A. W.	Terre Haute	R. D
Drake, J. F.	Prairieton	R. D	Shaley, F. W.	Terre Haute	R. D
Davis, J. W.	Pimento	R. D	Stunkard, T. C.	Terre Haute	R. D
Dowell, Solomon	Middleton	E. 10	Spottawood, E. F.	Terre Haute	R. D
Elder, W. R.	Terre Haute	H. D	Schell, Walker	Terre Haute	R. D
Eichelberger, W. C.	Terre Haute	R. D	Swoop, J. H.	Sanford	R. 10
Ershine, A. C.	Terre Haute	R. D	Shickel, J. T.	Terre Haute	R. 10
Gerstmeier, C. P.	Terre Haute	R. D	Smith, E. W.	Terre Haute	E. D
Glover, E. E.	Terre Haute	R. D	Stark, W. I.	Fontanet	H. D
Given, C. C.	Lewis	R. D	Stock, Lewis	Lewis	E. D
Graham, F. B.	Farmersburgh	R. D	Standaker, Albert	Terre Haute	R. 3
Griffith, L. C.	Lackport	R. D	Thompson, H. H.	Terre Haute	H. D
Hichman, C.	Fontanet	R. D	Tomlin, Ben	Terre Haute	R. D
Hyde, John	Terre Haute	H. 3	Thompson, M. H.	Prairie Creek	R. 10
Hanes, D.	Terre Haute	E. 10	Talbot, J. M.	Prairie Creek	R. 10
Haworth, W. W.	Terre Haute	R. D	Willien, L. J.	Terre Haute	R. D
Hunt, J. S.	Maxville	R. D	Waters, M. H.	Terre Haute	H. D
Huff, J. H.	Sanford	R. 10	Weinstein, L. J.	Terre Haute	R. D
Jenkins, W. O.	Terre Haute	R. D	Worrell, J. P.	Terre Haute	R. D
Langhead, J. T.	Terre Haute	R. D	Willis, J. R.	Terre Haute	R. D
Larkins, E. L.	Terre Haute	R. D	Wilson, A. L. M.	Terre Haute	H. D
Link, J. E.	Terre Haute	R. D	Watkins, S.	Ellsworth	R. D
Leachman, J. S.	Burnett	R. D	Young, Stephen	Terre Haute	R. D
Loyd, T. A.	Prairieton	R. D	Zimmerman, C. F.	Terre Haute	R. D

Regular, 81; Eclectic, 10; Homeopathic, 7; Physio-Medical, 1; not reported, 1.

Wabash County.

Ader, Henry	Somerset	R. D	Mooney, H. C.	Laketon	R. D
Alexander, Wm. P.	Rich Valley	E. D	Modricker, J. M.	Wabash	R. 10
Blount, R. F.	Wabash	R. D	Moore, P. G.	Wabash	R. D
Biggerstaff, J. T.	Lagro	R. 3	Murphy, D. I.	Wabash	P. M. D
Broadbeck, G. H.	Roan	R. D	Lower, M. O.	N. Manchester	R. D
Brady, T. R.	Wabash	R. D	Lancaster, T. A.	N. Manchester	R. D
Brady, C. C.	Lincolnvill	R. D	McGrew, W. H.	Lafontaine	E. D
Bricker, Wm.	Lincolnvill	E. 3	O'Neal, Laughlin	Somerset	R. D
Bloomer, F. H.	Lagro	R. D	O'Neal, Orin	Somerset	R. D
Dicken, J. L.	Lafontaine	R. D	Renner, J. H.	Lagro	R. D
Dicken, C. L.	Lafontaine	R. D	Renner, M. E.	Urbana	R. D
Donaldson, E. F.	Wabash	E. D	Smith, A. J.	Wabash	R. D
Dederick, Wm.	Roan	H. 10	Smith, Mrs. L. F.	Wabash	R. D
Ellis, Chas. S.	Wabash	R. 10	Studley, J. W.	Lafontaine	R. D
Ginther, David	N. Manchester	E. 10	Shaffer, Philip	N. Manchester	R. D
Goshorn, David G.	N. Manchester	E. 10	Stradley, D. W.	Wabash	R. 10
FORD, J. H.	Wabash	R. D	Shellhamer, D. C.	Puckerbrush	E. D
Hale, M. M.	Wabash	R. D	Steward, J. W. G.	Wabash	H. D
Hale, N. T.	Wabash	R. D	Steward, Wm. R.	Wabash	H. D
Howser, B. G.	Somerset	R. D	Steward, Wm. F.	Wabash	H. D
Howser, J. A.	Somerset	R. D	Sowers, J. H.	Disco	R. D
Kidd, G. P.	Roan	R. D	Wells, Wm. Y.	Laketon	R. D
Kantz, Jehn	Lagro	R. D	Winton, Horace	N. Manchester	R. D
King, C. H.	Wabash	R. D	Willson, James	Wabash	R. D

Regular, 37; Eclectic, 6; Homeopathic, 4; Physio-Medical, 1.

Warren County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Bernard, George W.	Rainsville . . .	D	Porter, A. M. . . .	State Line . . .	R. D
Campbell, T. B. . . .	West Lebanon . R. D		Roseberry, I. A. . .	Independence. . R. D	10
De Hart, Jacob . . .	Williamsport . R. D		Swank, Leroy . . .	Williamsport . R. D	
Fenton, S. C. . . .	Williamsport . R. D		Trent, J. H. . . .	Marshfield . . .	E. 10
Kester, J. H. . . .	State Line . . .	R. D	Vick, Wm. B. . . .	Green Hill . . .	E. D
McMullen, J. W. . . .	Pine Village . .	R. 3	WATSON, J. R. . . .	West Lebanon . R. D	
Osburn, S. N. . . .	Williamsport . R. D				

Regular, 11; Eclectic, 1; not reported, 1.

Warrick County.

Beeler, Jerome S. . .	Boonville . . .	H. D	Musgrave, S. D. . .	Newburg . . .	H. D
Brown, Lee. . . .	Heilman . . .	R. D	Morganheimer . . .	Elberfeld . . .	R. D
Brown, A. P. . . .	Wheatonville . R. 3		Mills, W. Henry . .	Folsomville. . R. D	
Baldwin, I. J. . . .	Newberg . . .	R. D	McCoy, T. J. . . .	Eby	R. 10
Camp, Geo. A. . . .	Lynnville . . .	E. 10	McCool, H. T. . . .	Chandler . . .	R. D
Camp, Joseph W. . .	Lynnville . . .	E. 10	McVey, W. H. . . .	DeGonia . . .	R. 10
Camp, W. F. . . .	Lynnville . . .	E. 3	Newton, J. A. . . .	Boonville . . .	H. 10
Camp, W. O. . . .	Dickeyville . .	E. 10	Quiatt, Alison . . .	Tennyson . . .	R. 10
Daly, T. G. . . .	Boonville . . .	R. 10	Rhodes, E. R. . . .	Yankeetown . H. D	
DeForest, D. A. . .	Boonville . . .	R. D	Scales, T. D. . . .	Boonville . . .	R. D
Dubois, J. M. . . .	Lynnville . . .	H. D	Scales, Harvey . . .	Boonville . . .	R. D
Howard, T. M. . . .	Boonville . . .	R. D	Shawl, M. . . .	Boonville . . .	R. D
Hewins, W. A. . . .	Chandler . . .	R. D	Smith, Thomas . . .	Canal	R. D
Hedden, G. J. . . .	Selvin	R. 10	Slaughter, W. W. .	Newburg . . .	R. D
Hammel, John . . .	Lynn	R. D	Tyner, S. L. . . .	Chandler . . .	R. D
Hoover, P. N. . . .	Boonville . . .	H. D	Tillman, J. R. . . .	Newburg . . .	R. D
Honeycutt, W. J. .	Ditae	R. 3	Thompson, P. S. . .	Newburg . . .	R. D
Heart, E. H. . . .	Tennyson . . .	R. 3	TUCKER, D. W. . .	Boonville . . .	R. D
Jones, T. B. . . .	Lynnville . . .	R. D	Wilson, Wesley . . .	Yankeetown . R. D	
Keegan, C. J. . . .	Canal	R. D	Walden, W. M. . . .	Newburg . . .	R. D
Keifer, Charles . . .	Newburg . . .	R. 10	West, E. A. . . .	Folsomville . R. 10	
Lake, George. . . .	Newburg . . .	R. D	Zimmerman, J. . . .	Lynnville . . .	R. D

Regular, 34; Eclectic, 4; Homeopathic, 6.

Washington County.

Applegate, —. — . .	Chestnut Hill .	3	McPheeters, Jno. S. .	Hardinsburg . R.	
Baker, T. H. . . .	Pekin. . . .	R.	Martin, R. W. . . .	Salem. . . .	R.
Bright, Wm. H. . . .	Martinsburg . R.		Mitchell, J. J. . . .	Canton	R.
Bradshaw, A. . . .	Beck's Mill. . .	R.	Murphy, C. W. . . .	Salem	R.
Barnett, J. T. . . .	Hardinsburg . R.		Neyman, E. M. C. . .	Saltelloville . R.	
Bare, Jno. R. . . .	Salem. . . .	R.	Neyman, Hiram . . .	Saltelloville . R.	
Deeweese, Geo. W. .	Fredericksburg. R.		Overman, Ed. . . .	Salem. . . .	P. M.
Doolittle, —. — . .	Campbellsburg. R.	3	Oatley, Jno. H. . . .	New Philadel'a R.	
Duff, S. W. . . .	Salem. . . .	R.	Overman, Wm . . .	Salem. . . .	P. M.
Farree, Isaac. . . .	Livonia. . . .	R.	Paynter, C. L. . . .	Salem. . . .	R.
Henderson, H. D. . .	Salem. . . .	R.	Paynter, Horace . .	Salem. . . .	R.
Herron, T. W. . . .	Lesterville . .	R.	Purkhiser, W. J. . .	Salem. . . .	R.
Hancock, G. S. . . .	Campbellsburg R.		Rathburn, Chas . . .	Salem. . . .	R.
Hobbs, H. C. . . .	Salem. . . .	R.	Roberts, —	Fredericksburg. R.	
Hoggalt, Mahlon. . .	Salem	P. M.	Spurgeon, —	Kossouth . . .	R.
Howard, S. B. . . .	Kossouth . . .	R.	Schoonover, — . . .	Hardinsburg . R.	
Hall, I. S. . . .	Camp'sburg P. M.		Tucker, Thos. M. . .	Salem	R.
Lockheart, Thos . . .	Rush Creek P. M.		Voyles, V. A. . . .	Livonia. . . .	10
Layman, I. H. . . .	Chestnut Hill . R.		WILSON, R. J. . . .	Salem	R.

Regular, 29; Physio-Medical, 5; not reported.

Wayne County.

Name.	Post Office.	School.	Name.	Post Office.	School.
Allen, J. B.	Hagerstown	R. D	Kelsey, L. S.	Richmond	R. D
Bean, Alfred H.	Williamsburg	P.-M. D	Lounsburg, O. W.	Dublin	H. D
Broadwell, Wilmer	Cambridge City	R. D	Lorimer, J. H. D.	Centreville	R. D
Boyd, H. B.	Cambridge City	R. D	Lukens, John H.	Richmond	R. D
Bond, Chas. S.	Richmond	R. D	Lowe, G. N.	Hagerstown	N. R. 10
Ballenger, W. L.	Richmond	R. D	Mauk, John R.	Cambridge City	R. D
Benham, H. R.	Richmond	R. D	McTaggart, C. R.	Dublin	E. D
Benham, J. F.	Richmond	R. D	McClelland, J. S.	Dublin	E. D
Ballard, N. H.	Richmond	R. D	Mann, L. S.	Richmond	H. D
Bappart, A.	Richmond	R. 10	Mendenhall, W. O.	Richmond	R. D
Bulla, J. M.	Richmond	H. D	Meredith, C. F.	Richmond	R. D
Bunton, E. A.	Greensfork	R. D	Morrow, Sarah J.	Richmond	R. 3
Baldwin, Geo. C.	Dalton	N. R. 3	McDivitt, E. G.	Richmond	H. D
Colburn, C. P.	Richmond	R. D	Newlin, E. S.	Richmond	R. D
Canady, N. F.	Hagerstown	H. D	Neff, W. W.	Greensfork	R. 3
Clark, J. B.	Economy	R. D	Pitman, Henderson	Hagerstown	R. 3
Carpenter, D. L.	Camb. City	N. R. 10	Quick, J. C.	Hagerstown	P.-M. D
Darnelle, T. E.	Centreville	R. D	Kife, J. J.	Boaton	R. D
Dempsey, W. S.	Richmond	R. D	Ruek, Anna E.	Richmond	P.-M. D
Davis, T. H.	Richmond	H. D	Robbins, G. W.	Richmond	R. D
Dennison, A. M.	Richmond	R. D	Reynolds, Margaret J.	Richmond	H. D
Emmons, Joshua	Richmond	H. D	Study, J. N.	Cambridge City	R. D
Gifford, S. A.	Richmond	R. D	Swisher, Lotta D.	Cambridge City	R. D
Grant, Geo. H.	Richmond	R. D	Sweeney, I. F.	Milton	R. D
Grosvenor, E. B.	Richmond	H. D	Summers, J. B.	Milton	R. D
Gundry, L. H.	Richmond	R. D	St. Clair, J. W.	Milton	R. 10
Gabel, Harrison	Centreville	R. D	Swallow, J. E.	Abington	R. D
Griffs, W. T.	Whitewater	E. D	Schiltneck, V. G.	Hagerstown	R. D
Graham, W. B.	Fountain City	R. 3	Stotelmeyer, C. I.	Hagerstown	R. D
Gentle, L. M.	East Germantown	R. D	Smith, S. E.	Richmond	R. D
Hale, Thomas T.	Dublin	E. D	Tillson, Hosea	Centreville	R. 10
Helen, W. M.	Williamsburg	E. D	Taylor, L. B.	Dublin	R. 10
HIBBERD, JAS. F.	Richmond	R. D	Thurston, E. H.	Hagerstown	P.-M. 10
Harold, C. N.	Richmond	P.-M. D	Taylor, T. W.	Fountain City	R. D
Harold, I. S.	Richmond	P.-M. D	Taylor, James E.	Richmond	R. D
Hobbs, M. W.	Richmond	R. D	Teague, I. C.	Richmond	H. 10
Haynes, M. H.	Richmond	R. D	Thurston, J. M.	Richmond	P.-M. D
Hopkins, R. R.	Richmond	R. D	Watts, E. K.	Richmond	R. D
Harter, Wm. W.	Hagerstown	P.-M. D	Wampler, J. M.	Richmond	R. 3
Intze, Joseph	Richmond	R. D	Weist, J. R.	Richmond	R. D
Johnson, L. C.	Fountain City	R. D	Wells, J. A.	Richmond	P.-M. D
Johnson, Rhoda B.	Fountain City	R. D	Weiss, H. H.	Richmond	R. D
Johnston, M. F.	Richmond	R. D	Wright, J. E.	Cambridge City	H. D
Jacks, Jas. R.	Boston	E. D	Witmer, B. M.	Milton	E. 10
Kersey, Silas H.	Centreville	R. D	Wray, Hardy	Dublin	E. 10
Kersey, Charles A.	Richmond	R. D	Zimmerman, W. W.	Richmond	H. D
King, James E.	Centreville	R. D			

Regular, 59; Eclectic, 10; Homeopathic, 12; Physio-Medical, 9; not reported, 3.

Wells County.

Cassell, George W.	Keystone	R. 10	Mackey, H. P.	Poneto	R. D
COOK, L. H.	Bluffton	R. D	Matts, J. A.	Ossian	R. D
Davenport, E. P.	Craigville	R. 10	Matts, J. L.	Ossian	R. 10
Dickey, E.	Murray	R. D	Morris, T.	Mt. Zion	R. 10
Doster, H. L.	Poneto	R. D	Murray, L. E.	Zanesville	R. D
English, C. H.	Uniondale	R. D	Neff, I. M.	Mt. Zion	R. D
Fitzpatrick, J. D.	Vers. Cruz	R. 10	Newman, M. A.	Ossian	R. D
Fulton, George	Bluffton	R. D	Noble, H. J.	Zanesville	R. 10
Fulton, J. C.	Bluffton	R. 10	Ransom, John A.	Barber's Mills	R. D
Garrett, F. W.	Liberty Centre	R. D	Renear, E.	Liberty Centre	R. D
Goodwin, S. G.	Nottingham	R. 10	Spaulding, L. A.	Bluffton	R. D
Hatfield, I. N.	Bluffton	R. D	Springstead, A. E.	Bluffton	H. D
Horton, R. R.	Bluffton	E. D	Waldron, —	Nottingham	R. 10
Horton, T. H.	Bluffton	R. 10	Weer, H. H.	Bluffton	E. D
Mason, L.	Bluffton	R. D	Wilson, C.	Domestic	R. D

Regular, 27; Eclectic, 2; Homeopathic, 1.

White County.

<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>	<i>Name.</i>	<i>Post Office.</i>	<i>School.</i>
Ballou, A. B.	Burnett's Creek.	R. D	McCann, J. D.	Monticello	E. D
Carr, J. L.	Monon	R. D	Nolan, J. H.	Buffalo	R. D
Clayton, George R.	Monon	R. D	ROBISON, F. B.	Monticello	E. D
Cowger, S. R.	Monticello	E. D	Reed, J. H.	Idaville	R. D
Clark, R. J.	Monticello	R. D	Sluyter, S. D.	Chalmers	E. 10
Didlake, M. T.	Monticello	R. D	Small, H. E.	Walcott	E. D
Delsell, R. M.	Reynolds	R. 10	Sampson, W. H.	Brookston	E. 10
Henry, L. W.	Burnett's Creek.	R. 10	Smith, J. T.	Brookston	R. D
Holtzman, W. H.	Brookston	R. D	Scott, Caleb	Monticello	P-M. 10
Harland, W. O.	Monon	R. D	Spencer, William	Monticello	R. D
Jones, A. B.	Burnett's Creek.	R. D	Tillett, J. A.	Buffalo	R. D
Kelley, D. M.	Brookston	R. D	Walker, W. O.	Walcott	R. D
McAllister, J. W.	Idaville	R. 10	Wilkerson, W. W.	Monticello	P-M. D
Medarius, John	Brookston	R. 10	Wilkerson, Hattie L.	Monticello	P-M. D
Morris, G. M.	Headley	R. D			

Regular, 20; Eclectic, 6; Physio-Medical, 3.

Whitley County.

Amermann, S. D.	Columbia City . .	H. 10	Magers, Francis M.	Churubusco	R. D
Criswell, John F.	Churubusco	R. D	Merriman, Elijah	South Whitley	R. D
Coyle, Wm. Henry	Hecla	R. D	Richards, John	Land	E. D
Eberhardt, Eli L.	South Whitley	R. D	SCHUMAN, O. V.	Columbia City	R. D
Ferguson, W. G.	Coease	R. D	Scott, J. Wm. C.	Hecla	R. D
Bainbridge, Nettie F.	Columbia City	R. D	Souder, Christopher	Larwill	R. D
Greiser, Frederick G.	Collins	R. D	Squires, James W.	Churubusco	R. D
Geary, J. K.	Coease	R. D	Williams, Charles C.	Columbia City	R. 10
Ireland, Martin	Columbia City	R. D	White, Samuel R.	Land	R. D
Kirkpatrick, Daniel	Larwill	R. D	Weber, William W.	Columbia City	R. D
Kithcart, Nathaniel I.	Columbia City	R. D	Webster, Monroe W.	South Whitley	R. D
Lafollette, Thos. J.	South Whitley	R. D	Webster David E.	Columbia City	R. D
Linville, David S.	Columbia City	R. D	Morrison, Thomas R.	Churubusco	R. D
Linville, David G.	Columbia City	R. D			

Regular, 25; Eclectic, 1; Homeopathic, 1.

RECAPITULATION.

Regulars	3,033
Eclectics	443
Homeopathic	233
Physio-Medical	164
Not reported	118
Totals	3,991

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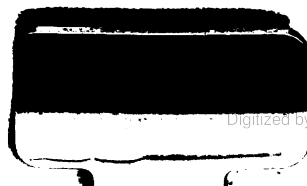
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